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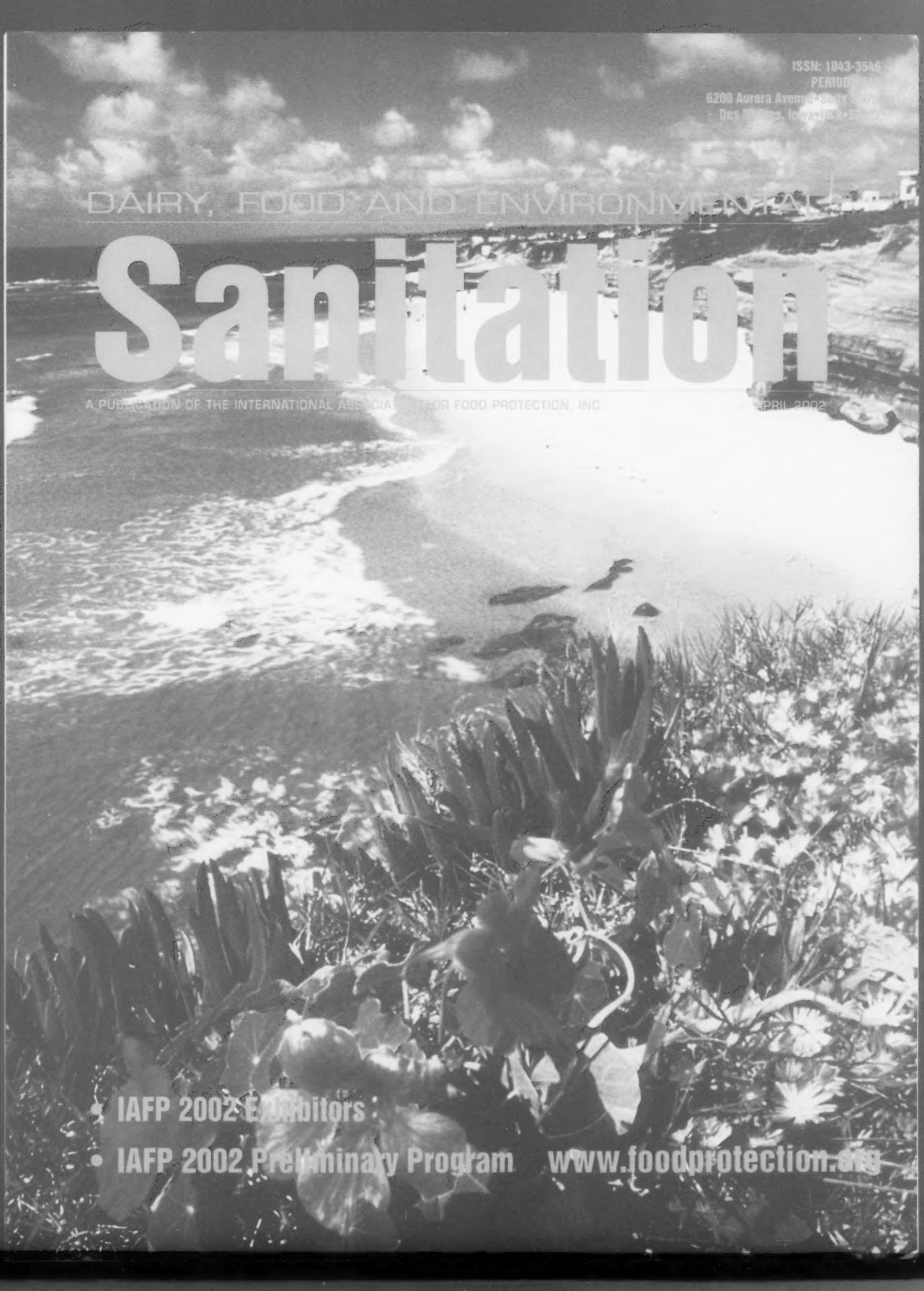
DAIRY, FOOD AND ENVIRONMENTAL

Sanitation

A PUBLICATION OF THE INTERNATIONAL ASSOCIATION FOR FOOD PROTECTION, INC. APRIL 2002



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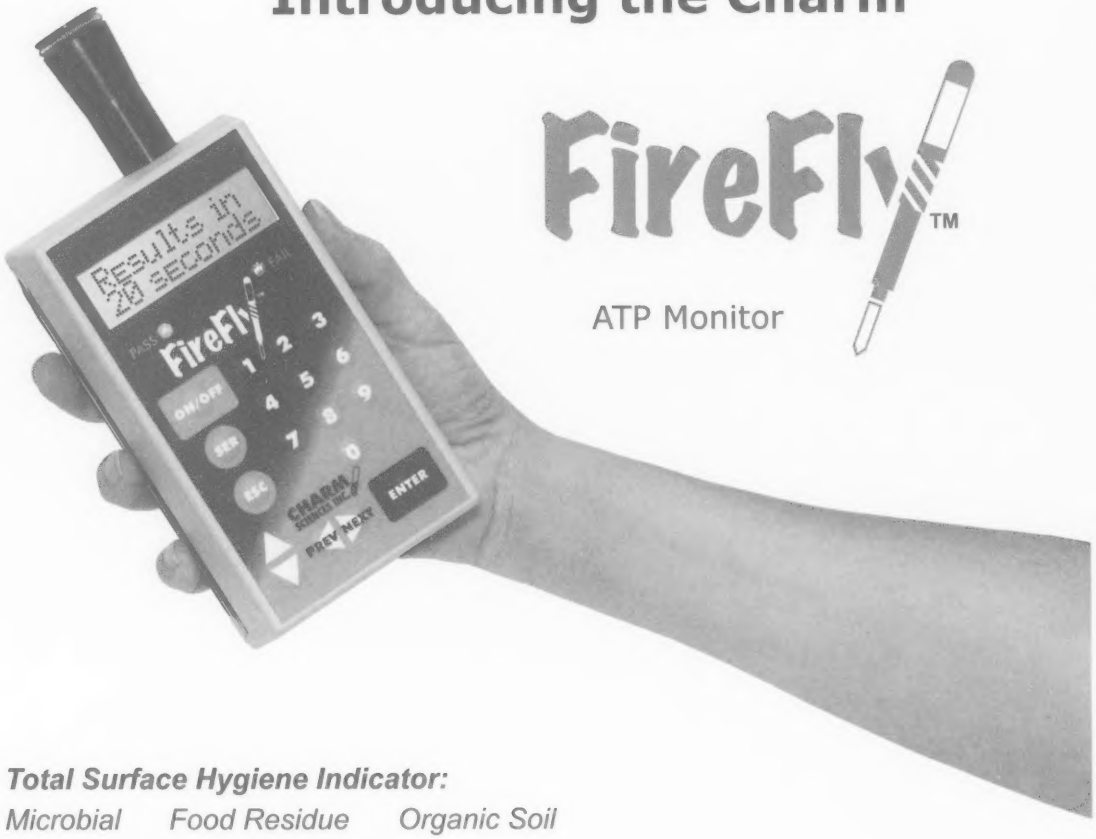

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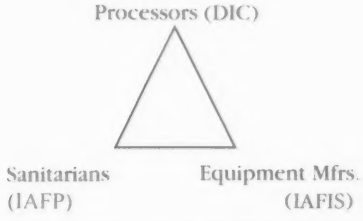
The 3-A Symbol Story

The 3-A Sanitary Standards Symbol Administrative Council, known throughout the industry as the "**3-A Symbol Council**," was organized in 1956. Its purpose is to grant authorization to use the **3-A Symbol** on equipment that meets 3-A Sanitary Standards for design and fabrication.



A Modern Concept

The modern concept of the 3-A program was established in 1944 when the Dairy Industry Committee (DIC) was formed. DIC is one of the three industry segments involved in the preparation of 3-A Sanitary Standards. These industry segments are:

- **Processors,** represented by DIC
- **Equipment Manufacturers**, represented by IAFIS
- **Sanitarians**, represented by IAFP

Use of the Symbol

Voluntary use of the **3-A Symbol** on dairy equipment:

- assures processors that equipment meets sanitary standards
- provides accepted criteria to equipment manufacturers for sanitary design & fabrication
- establishes guidelines for uniform evaluation and compliance by sanitarians.

3-A Sanitary Standards Symbol Administrative Council

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Cedar Rapids, IA 52403

Phone: 319-286-9221
Fax: 319-286-9290

E-mail: aaasansb@ia.net
Web site: http://zeus.ia.net/~aaasansb

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Sanitation

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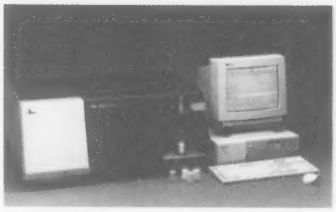
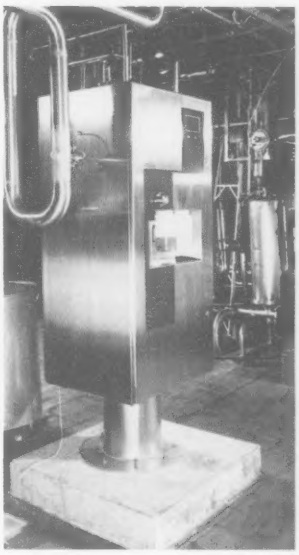


Laboratory Analysis of Dairy Products

Laboratory Analysis of Cheese & Food Products

At-Line or Lab Analysis of Cream, Whey & Fluid Milk



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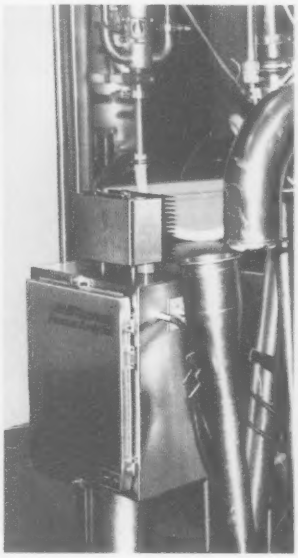

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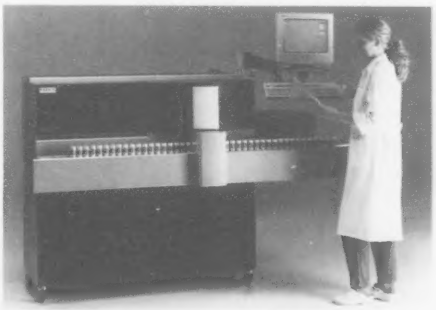

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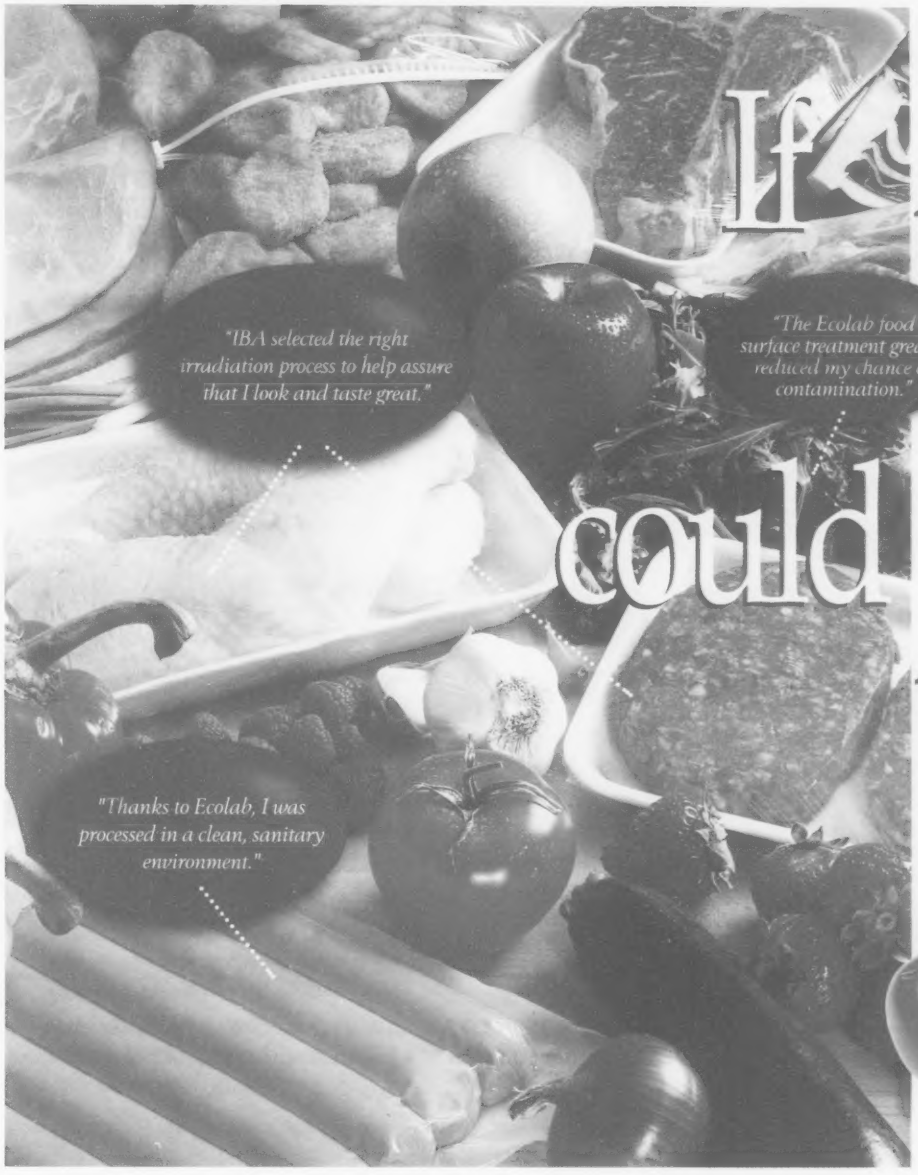
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Postcards from Iowa

By JAMES DICKSON
President

"The Annual Meeting is fast approaching!"

Hello! Check your calendars! The Annual Meeting is fast approaching! The program for IAFP 2002 promises to be one of the best that we have had. Fully one third more abstracts were submitted than last year, resulting in a truly outstanding program. The Program Committee had to schedule several "short" sessions for Tuesday afternoon, rather than the one general session, simply to include as many of the accepted abstracts as possible. I think it is a sign of the strength of the Organization that we have to worry about having too many good abstracts submitted, and that we have to be creative in fitting them all into the program. The Program Committee really had some challenges this year, and they did an incredible job of putting it all together.

You may have noticed that the Annual Meeting is a month earlier than usual. The meeting begins on Sunday, June 30 and ends on the evening of July 3. You may have wondered why we changed the date, and there were several factors that went into that decision. I think it would help if I explained the process for deciding on the location and time of the Annual Meeting.

First, because of the size and growth of our Annual Meeting, we find that we are becoming more restricted in the locations. We are a victim of our own success! Fewer and fewer locations and hotels can accommodate what our Annual Meeting has become. As the locations become more restricted, we have to work further in advance. You may not realize it, but as we speak we are already narrowing the choices for the 2005 meeting. And what was even more surprising to me, many of the locations and hotels are already booked. We do try to move our meeting around geographically, so that we don't always meet in the same part of the country. In addition, since many of our attendees and exhibitors attend other meetings (notably IFT and NEHA), we have to try to avoid overlapping our meeting with one of the others. This is particularly true for exhibitors, who often need a two week window between meetings to arrange for the transportation of their displays.

For San Diego, we had to work around several of these issues. There were only two hotels that could accommodate us, and those had conflicts with our regular dates. While we could have worked around these, the rooms would have been even more expensive than they are now. We do try to keep our room rates as low as possible, although San Diego is one of our more expensive meeting locations. The end result was that we could have the meeting in San Diego, if we were willing to move the dates to either early July or late August. Since late August would have conflicted with the start of school, we opted for early July. The IFT meeting is in Anaheim this year, and that meeting ends on Wednesday, June 19. This means that for many of our exhibitors and some of our Members, they have just 10 days off before the start of the IAFP meeting. Since the exhibitor booths will already be in Southern California, it will not present a problem for them to simply move from the Los Angeles area to San Diego.

Having said all of that, wait until you see the location! While we have been in many, many beautiful locations in the past, I believe that I have a new favorite. The hotel is on the waterfront, and the view from the 40th floor, looking out over Coronado Island, is incredible. I think you will be pleased with the location and with the accommodations. The meeting rooms, including those for the technical sessions and the professional development groups, are outstanding. I don't think that anyone will be disappointed.

Plan to come, attend the sessions and share experiences with old and new friends. We look forward to seeing you there.

Same time, next month.

Special Recognition

In memory of Don F. Splittstoesser and Peggy Matthews Foegeding and their numerous contributions to the field of food safety, this year's Developing Scientist 1st Place Awards will be presented in their honor. The winner of the 1st Place Oral Award will receive a plaque inscribed in honor of Peggy Matthews Foegeding. The winner of the 1st Place Poster Award will receive a plaque inscribed in honor of Don F. Splittstoesser. Both Don and Peggy were true inspirations and will be greatly missed.

IAFP Job Fair

Attention

Job Seekers and Employers

Employers, take advantage of recruiting the top food scientists in the world! Post your job announcements and interview candidates at IAFP 2002. If you are seeking a career change, are a college senior or recent graduate, bring several copies of your curriculum vitae (C.V.)!

Contact Manan Sharma for more information at 770.228.7283 ext. 115 or E-mail: msharma@cfs.griffin.peachnet.edu.

COMMENTARY

From the Executive Director

By DAVID W. THARP, CAE
Executive Director

"You are sure to fall in love with San Diego"

San Diego in the summertime! San Diego for the Fourth of July! San Diego anytime! I cannot think of a city in the USA that has a more constant temperature year-round than San Diego. High temperatures in the mid 60s to the upper 70s all year – that sounds pretty tempting to a Midwesterner! As you are aware, IAFP 2002 will be held at the Manchester Grand Hyatt in San Diego from June 30 to July 3 this summer. From the average temperature charts, we can expect highs in the mid-70s during our stay and overnight low temperatures in the low to mid-60s. The weather should be beautiful for our 89th Annual Meeting.

This issue of *DFES is* our pre-Annual Meeting issue and contains program information, exhibitor listings, descriptions of tours, pre-meeting workshops and our social events along with the registration form. Also included are instructions on making your hotel reservations. If you haven't done so yet, we encourage you to pick up the phone now and make your reservations. We arranged a great, economical rate for you at the finest hotel in all of San Diego – the Manchester Grand Hyatt! You will have a beautiful view of San Diego Bay from your hotel room while relaxing between presentations.

The hotel is convenient to Seaport Village which houses unique shopping and dining facilities. A short walk away is the historic Gaslamp District with a large number of top-rated restaurants and nighttime entertainment areas featuring live music and dancing. You are sure to fall in love with San Diego!

Although the weather, the city, restaurants and entertainment might attract your attention, we know that even more important to our Annual Meeting attendees is the program content for the meeting. The Program Committee spent many hours bringing this year's program together. We have more than 400 presentations on the agenda for IAFP 2002! There are 23 symposia, 6 technical sessions and 5 poster sessions in addition to 2 lectures and the Opening Session Ivan Parkin Lecture. You can review the session topics on page 287 of this issue. Additional details such as presenter name and presentation titles will be available in the May issue of *DFES* or at the IAFP Web site (by the end of April). There is something for everyone on this year's program, so be sure to check it out.

We have made time in the schedule for socializing and networking with colleagues. This is a very important aspect of attending the Annual Meeting; so do not overlook these opportunities. On Sunday evening, the Opening Reception is held in the Exhibit Hall. This event provides an occasion to mingle with old friends and meet new ones too! It is also a great time to make a trip around the Exhibit Hall to "scope out" exhibitors that you will want to see over the next couple of days.

Monday late afternoon and evening brings two additional options for socializing. After the day's sessions conclude, a reception held in the Exhibit Hall gives rise to conversation and relaxation. Immediately following that reception, the Monday Night Social takes place at the famed San Diego Zoo. Be sure to join your colleagues for this fun-filled trip to the zoo. An exclusive dinner will be provided and there will be time for your exploration of the zoo displays. It is sure to be an evening to remember!

Coffee and other refreshments are available in the Exhibit Hall during session break times and at other times during the day; so be sure to take advantage of these times to network also. On Tuesday evening, we have a very limited number of tickets avail-

able for our San Diego Dinner Cruise on San Diego Bay. Otherwise, Tuesday evening is left open for your choice of socializing options. Venture out to Old Town with friends, walk to the Gaslamp District for a relaxing dinner with colleagues or dance the night away; the choice is yours to make!

On Wednesday evening we will wrap up IAFP 2002 with the Awards Banquet. This is a great time to gather to honor and recognize the achievements of many of your colleagues. This year the banquet will take place on July 3 – you may want to consider extending your stay in San Diego to take in all of the celebrations that occur on the Fourth of July. There will be fireworks in the Bay and all around town! Many neighborhoods and area attractions hold festivals and celebrations so plan now to stay over! Bring the family too!

As you can see, there is lots of planning that goes into the Annual Meeting. One group who is helping us out this year is a new Affiliate named Southern California Association for Food Protection (SCAFP). This Affiliate will assist us with many of the local arrangement's functions as many other Affiliates have done in the past. Because they are new and do not have the number of people necessary to perform all of the functions, we will also receive assistance from the Student PDG. We want to thank both the Student PDG and SCAFP for their willingness to help bring the leading food safety conference to San Diego! We look forward to seeing you there!

WORLD-FAMOUS
San Diego Zoo

Monday Night Social at the San Diego Zoo

Monday, July 1, 2002

6:00 p.m. – 10:00 p.m.

Join us for the Monday Night Social and see first hand some of the world's rarest wildlife. Dinner will be provided in a reserved area for IAFP 2002 attendees. The Zoo will remain open to you and the public until 10:00 p.m. Explore the Zoo on a three-mile guided double-deck bus tour or go on your own adventure.

Get your ticket today
or visit our Web site at www.foodprotection.org

See the registration form on page 293 of this issue.

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Validation and Optimization of Chilling and Holding Temperature Parameters as Critical Control Points in Raw Meat and Poultry Processing Establishments

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SUMMARY

Three meat and poultry processors required validation of critical control points (CCPs) in their HACCP plans to satisfy USDA requirements for HACCP implementation. In-plant data, including product/room temperatures, total aerobic plate counts, coliform and generic *E. coli* counts, and data on the presence of *Salmonella*, were collected to establish or modify CCPs in the processes. Measuring the product temperature as a CCP in a poultry fabrication process while processing in a non-refrigerated area was validated. Over the course of the day, there were no significant increases in product temperatures or in microbial loads on the food contact surfaces. In a beef fabrication process, data were collected to allow the processor to monitor room temperature as the CCP as opposed to product temperature. Again, the microbial loads on the food contact surfaces did not increase as long as the room temperature remained near 50°F for less than 4 hours. Finally, data were collected to determine the critical limits for a CCP during the production of cured pork trim. Microbial loads on the cured fat and skin trim increased significantly during chilling when their original method was used. A new chilling method in a brine solution was implemented to reduce temperatures quickly and thus inhibit microbial growth. All three processors presented the data to the USDA and were subsequently allowed to operate using the new validated parameters

A peer-reviewed article.

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International Association for Food Protection

INTRODUCTION

Recent foodborne disease outbreaks have resulted in increased consumer demand and subsequent regulatory pressure to improve the microbiological safety of raw food commodities in food processing facilities. It is well established that raw meat and poultry are prevalent sources of foodborne pathogens and vehicles of foodborne disease. To address the safety of meat and poultry, the USDA-FSIS has implemented new regulations *(2)* that call for pathogen reduction measures and that set microbiological performance standards that all meat and poultry processors must meet.

One aspect of the new USDA/FSIS regulatory requirements with regard to pathogen reduction is the implementation of Hazard Analysis and Critical Control Point (HACCP) plans in meat and poultry processing facilities. All federally inspected meat and poultry processors were required to implement HACCP by January, 2000. Large and small processors implemented HACCP in 1998 and 1999, respectively, whereas very small processors implemented in 2000.

HACCP was initially developed by NASA and Pillsbury to provide the safest food possible for the space program. The National Advisory Committee for the Microbiological Criteria for Foods have standardized the original HACCP concept into 7 step-by-step principles that can be used by the food processing industry to reduce, prevent, or eliminate biological, chemical, and physical hazards that might occur in the final food product *(4)*. A properly written, plan, when implemented, should reduce hazards if the appropriate hazards are identified in the hazard analysis and the critical limits (CL), and if corrective actions are based on sound scientific data. However, much of the scientific information needed to develop scientifically sound HACCP plans is not available, especially in processing environments where there are no "kill" steps. Meat and poultry processors producing a raw final product typically must rely on temperature control to prevent the growth of pathogens.

Additionally, processors are facing "Phase II" of HACCP implementation, in-depth verification (IDV). Currently, IDV are conducted "for cause" only, but processors soon will be randomly selected to undergo an IDV. Eventually most processors will be subjected to this in-depth analysis of their HACCP plan.

During an IDV, the FSIS will send a team of scientists and regulatory officials to review the adequacy of the HACCP plan and Sanitation Standard Operating Procedure (SSOP) programs *(3)*. The current FSIS protocol is to use a "checklist" system to document that the HACCP plan is scientifically valid. Each section of the HACCP plan will be evaluated and particular emphasis will be given to the hazard analysis and critical control point (CCP) sections. Decisions made in these sections must be science-based and must be applicable in the processing plant environment. Scientific data used to support decisions must be validated in a processing plant environment as well as in laboratory studies. Currently there is a lack of scientific data to bridge the gap between laboratory studies and in-plant applications.

The objective of this study was to validate the use of various temperature parameters and monitoring methods that can ensure the safety of raw meat and poultry products and that can be used as "scientific evidence" by the processors facing an IDV.

MATERIALS AND METHODS

Validation of poultry fabrication process

While assisting a poultry processor in development of a HACCP plan, we needed to decide whether or not to refrigerate a processing room and whether monitoring product temperature would be a valid CCP in the process. The company's whole process consisted of removing whole frozen chicken from the freezer, cutting it up into pieces, re-packaging the chicken pieces, and returning the product to the freezer. Although the processor thought that the room temperature remained below 60°F, we collected data to verify the temperature in the processing room over an extended period of time because the room was not refrigerated. A temperature probe equipped with a data recorder was placed in the processing area for 7 days. The data generated indicated temperature fluctuations during the process day. Additionally, we collected internal and surface product temperatures over several days of processing in the summer.

Based on the temperature data collected, we designed a study to determine if there was potential for pathogen growth on the surfaces of the equipment. Data was collected on three different days, at five different times per day: prior to start-up, 1 h after processing, prior to mid-shift clean-up (about 4 hours into the shift), immediately after mid-shift clean-up, and at the end of the shift but prior to the end-of-shift clean-up (about 4 h after mid-shift clean-up). Processing room equipment was swabbed at 4 different locations (saw blade and table, boning table 1, boning table 2, and weighing scale) to determine if the processing room temperature provided an opportunity for microbial growth on equipment, which could then contaminate product.

The sample sizes were determined using the method of Dormedy et al. *(1)*. On each of 3 sampling days, 4 composite samples from the designated surface locations were collected from each sampling location at each of the 5 sampling times, for a total of 60 composite samples. Microbial analyses, including total aerobic plate counts, generic *E. coli* and coliform counts, and presence of *Salmonella*, are described later.

CCP validation — processing room temperature

A processor producing subprimal cuts of beef from beef carcasses had a similar need. They were monitoring the processing room temperature as their CCP. The Critical Limit (CL) of the CCP as written in the plan was that processing room temperature must be less than 50°F. However, they had originally intended that the critical limit not exceed 50°F for more than 4 hours. USDA/FSIS inspectors would not allow them to change the CL until a "statistically sound, scientific study" was conducted to validate that it is safe for the processing room temperature to be slightly over 50°C for 4 hours rather than slightly below 50°C for 4 hours. The processor initially proposed to collect product temperature data to monitor the CCP, but the inspector was concerned about microbial growth on the cutting board surfaces that might potentially cross-contaminate the product. Therefore, they would not allow the processor to measure product temperatures instead of room temperatures.

To validate the CCP, we sampled cutting boards in the fabrication area 1 hour after start up. Cutting boards were sampled using the USDA/FSIS sponge method. The Final Rule describes the techniques in great detail *(2)*. Briefly, sterile sponges (Specisponge; Nasco, Fort Atkinson, WI) were hydrated with 25 ml of buffered peptone water (BPW; Difco Laboratories, Detroit, MI). Residual moisture was expelled from the sponge inside a Whirlpak bag (Nasco), and the sponge was removed from the bag with sterile gloved hands. Using a sterile template, 100 cm^2 areas were rubbed with the sponge 10 times each in horizontal and vertical directions. Each sample was a composite sample taken from 5 separate areas on the cutting board surface. Also, after 1 hour of processing, another cutting board from the fabrication area was removed from the processing tables and placed in the "control room," which was a separate refrigerated area with the temperature adjusted to 55-57°F. Cutting boards in the control room and in the processing area were sampled every hour for 5 hours after the initial sample was collected. The temperature of the control room and the processing area was noted at each sampling interval. Samples were stored on ice and transported to the food microbiology laboratory at University Nebraska-Lincoln, where we determined generic *E. coli*/Coliform counts and Total Aerobic Plate Counts as will be described later. No pathogen data were collected, at the request of the processor.

Validation of a ham trimming process

A ham processor was selling fat/skin trim from cured hams through a broker, presumably for use in the production of fried pork rinds. Fresh hams were artery pumped, placed in 36" × 47" × 30" stainless steel tubs containing water at approximately 125°F and allowed to soak approximately 30 minutes to make skin and fat pliable. Soaked hams were removed from the soak water and immediately skinned by hand, removing fat and skin together. Skins were placed into 37" × 45" × 24" plastic tubs after they were removed from the hams. When the tubs were full, they were held in a 45°F room until the end of the shift, packaged in 75 lb boxes, and transferred to a 28°F cooler for holding. Their CCP was to measure product temperature, and the trim was not to be shipped until it reached an internal temperature of 50°F. However, it was requiring approximately 48 hours to reach this temperature, and no time parameters were specified in the critical limit. The inspector advised the processor to validate this process and/or implement a new process to chill the skins faster.

We evaluated the process by collecting sponge samples from the surfaces of 5 hams prior to soaking in a water bath at approximately 125°F. A 50-ml sample of the soak water was collected as hams were placed into it. Hams were soaked for 30 minutes and removed. Again, sponge samples were collected from the surface of 5 different hams. Additionally, another 50 ml of soak water was collected at the end of the soaking process. Five different hams were sponge sampled and the fat/skin was trimmed from the hams and placed into the plastic tubs. After the 50°F CCP was met (48 h), sponge samples were collected from 5 boxes of skin/fat trim to determine if the microbial loads had increased before the critical limit had been reached. Total plate counts, coliform counts, and generic *E. coli* counts were determined for each sample. Data were collected on three separate processing days.

We recommended that the processor consider placing the skin/fat trim into water to reduce product temperature more rapidly. However, upon initial validation, we found that placing fat/skin trim into water actually increased microbial counts compared to dry holding. Addition of ice to the cooling water was also discussed but was determined to be cost prohibitive for the processor. Our final recommendation was to place the trim/fat skin into a salt brine similar to the cure solution to help retard microbial growth. Skin/fat trim was held an 8% salt brine solution prior to packaging. Microbial data were collected to validate that the new chilling method(s) controlled microbial growth.

Sponge samples were stomached for 2 min in a Stomacher Lab Blender 400 (Tekmar, Inc., Cincinnati, OH) and serially diluted in buffered peptone water (BPW). After plating for enumeration, all samples were incubated at 35°C for 18 to 24 hours to enrich for *Salmonella* spp. detection.

For determination of an aerobic plate count (APC), appropriate dilutions were plated in duplicate on 3M Petrifilm™ Aerobic Plate Count Plates (3M Inc., St. Paul, MN). For enumeration of total coliforms and generic *Escherichia coli* popu-

Figure 1. Microbial profiles on product contact surfaces in a non-refrigerated pathogen processing facility over the course of the processing day in the summer. Each sample represents the mean of 3 replications with each replication consisting of a composite sample taken from 5 locations. Significant ($P < 0.05$) differences were not detected among the data.

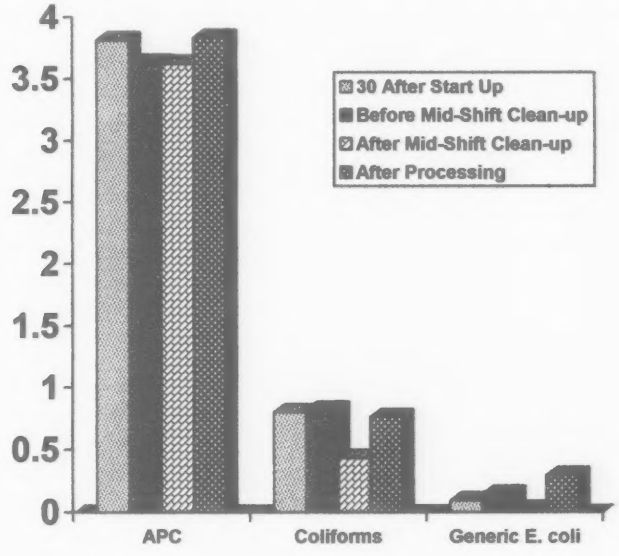
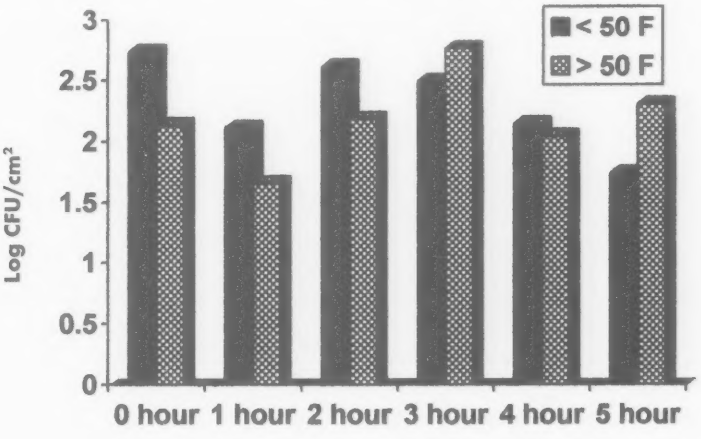


Figure 2. Total aerobic plate counts on beef fabrication surfaces held at 50°F and at 55-57°F for 5 hours. Each bar represents an average of 5 composite samples collected on 3 separate processing days. Significant ($P < 0.05$) differences were not detected.



lations, 3M Petrifilm™ Coliform/ *E. coli* Count Plates were used. Low populations of *E. coli* and coliforms were determined by MPN analysis as described in the USDA Microbiology Laboratory Guidebook *(6)*. All plates were incubated at 37°C and counted according to manufacturer directions. The APC and coliform counts were taken at 24 hours, and the *E. coli* counts were taken at 48 hours.

Following pre-enrichment of the samples, samples were screened for the qualitative presence of *Salmonella* spp. by use of Tecra UNIQUE™ *Salmonella* (Tecra© Diagnostics, Roseville, NSW, Australia) according to manufacturer's directions. Presumptive positive results obtained with Tecra UNIQUE were confirmed by streaking the suspect sample on xylose lysine desoxycholate (XLD) agar (Difco) and incubating at 37°C for 18 to 24 hours. Confirmation tests including catalase, cytochrome oxidase and API 20E (BioMérieux Vitek, Hazelwood, MO) were performed on suspect colonies as outlined in the U.S. Food and Drug Administration's *Bacteriological Analytical Manual (5)*.

RESULTS AND DISCUSSION

Validation of poultry fabrication process

The internal and surface temperatures of the poultry carcasses were less than 32°F when they entered the processing area. There were no significant increases in internal or surface product temperature during the course of the processing day (data not illustrated). Because the carcasses remained frozen during processing, microbial growth on the carcasses themselves was not a concern. There was a concern with growth of microorganisms on the processing surfaces and subsequent recontamination of the product later in the day.

The average aerobic plate count, coliform count and generic *E. coli* count on composite samples taken from 5 different equipment sampling areas for all three days showed no significant ($P< 0.05$) increases or decreases as the production day progressed (Fig. 1). It seems that placing cold chicken carcasses on the stainless steel equipment surfaces all day actually refrigerated the contact surfaces. Because chickens were out of the freezer for less than 30 minutes, they never had a chance to defrost and they kept the equipment cold. No *Salmonella* spp. were detected in any of the surface samples.

These data were used to support the selection of product temperature as a CCP in their USDA-required HACCP plan and illustrated that pathogens were not growing

Figure 3. Microbial profiles of ham skin/fat trimming during processing. Each bar represents the mean of 3 replications. Bars with different alphabetic superscripts within each microbial category differ significantly ($P < 0.05$).

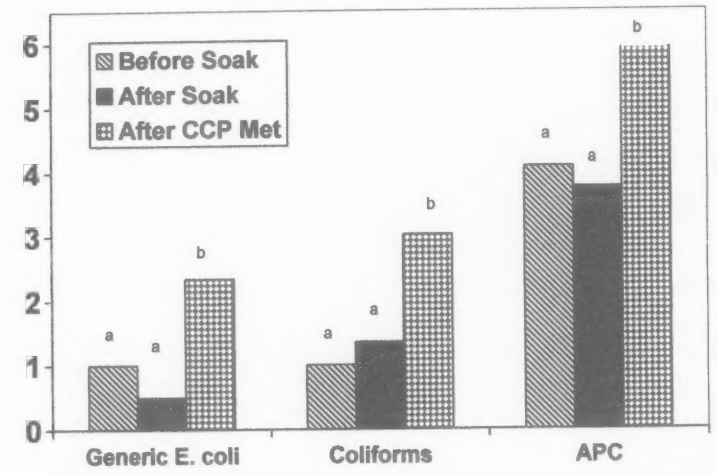
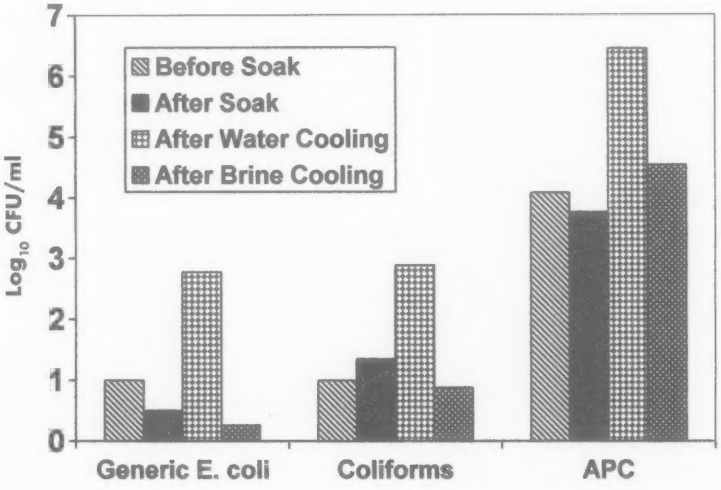


Figure 4. Microbial profiles of ham skin/fat trimming processed with alternative chilling methods. Each bar represents the mean of 3 replications. All samples collected after water cooling differ significantly ($P < 0.05$) from other samples within each microbiological category.



on the processing surfaces in this particular process.

Validation in beef fabrication facility

We determined the coliform/generic *E. coli* counts and the total aerobic plate counts of the surfaces of cutting boards held below 50°F in the beef fabrication area and on cutting board surfaces held above 50°F. Typically it is acceptable to continue processing a raw meat product in a room with a temperature above 50°F as long as all processing is completed within 4 hours. However, because this was not originally written into the HACCP plan, the processor had to provide scientific evidence that the product would be safe if the room remained at or near 50°F for 4 hours.

As with the poultry process, the product surface and internal temperatures did not increase significantly during processing (data not illustrated). The microbial data we collected indicated that even if the temperature of the fabrication area exceeded 50°F for up to 5 hours, the microbial profiles on the food contact surfaces were similar to the ones on food contact surfaces in a cutting room that was slightly below 50°F (Fig. 2). According to MPN analyses, there were fewer than 10 coliforms and generic *E. coli* in all samples at both temperatures. The numbers did not increase and the numbers were not even at measurable at levels at which we could conduct statistical analysis on them. Total plate counts on the surfaces were also very low. We did not observe a significant increase in the number of total bacteria during the 5 hour holding period on surfaces at either temperature (Fig. 2). Additionally, there were no significant differences in numbers of bacteria on the surfaces held below 50°F and on those held above 50°F during a 5 hour period. Again, the data were presented to USDA and the processors were allowed to change the CL in the HACCP plan.

Validation of ham trimming process

Upon initial validation, it was apparent that the ham chilling process originally used by the processor was too slow to prevent significant growth of microorganisms (Fig. 3). Prior to soaking the hams and after soaking there were no significant increases in the numbers of generic *E. coli*, coliforms, or total aerobic organisms. However, by the time trimmings were cooled to 50°F, there were significant increases in numbers of all of microorganisms detected. Generic *E. coli* increased 1 log cycle, coliforms increased 2.5 log cycles, and the aerobic microorganisms increased 2 log cycles. Because significant growth was occurring, we suggested that the processor implement changes in the process to facilitate rapid

cooling and/or prevent the growth of the organisms. There were no significant ($P<.05$) increases in microbial numbers on the lean portions of the hams exposed after trimming after the CCP was met or on the bones removed from the ham (data not illustrated).

Initially it was recommended that the trimmings be cooled in an ice-water bath prior to packaging. The processor did not have enough ice available in the facility to chill in ice water on a daily basis, and installing an ice machine was cost and space prohibitive. Two additional recommendations were made and they were again validated. The processor chilled the trimmings in cold tap water prior to packaging or in a cold brine solution. Chilling in the cold water did not prevent significant growth of indicator organisms during chilling (Fig. 4). However, chilling in the brine solution resulting in no significant increases in microbial growth. Chilling in the brine solution was not a significant cost for the processor and was easily implemented into his process. The trimmings were already labeled as "cured" because they were taken from a cured product, so no additional labeling was required.

CONCLUSIONS

Collection of in-plant data has become essential for processors who operate under parameters that differ from previously validated and/or accepted conditions. Without scientific data, the processors could face a loss of inspection and ultimately lose their businesses. The data collected in this study will be essential to support the HACCP plans developed by the processors when an in-depth verification is performed on the process. This data can also be used to support decisions made by other processors who operate using conditions similiar to those of the processors described in this study. A science-based HACCP plan is essential to control hazards. In-plant validation studies provide evidence that the HACCP plans are indeed controlling hazards and that processors can operate under unusual conditions provided that data have been collected to validate that the process is safe.

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Sanitary Design of Equipment: Active and Passive Measures

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SUMMARY

With ever-increasing public concern over the safety of food products, sanitation is of primary concern for the food processing industry. In response, food equipment manufacturers are placing greater emphasis on sanitary design of food equipment. In fact, during the design cycle, cleaning and sanitation of equipment is equally as important as all other performance criteria and of prime consideration in the earliest design phases. From a design perspective, there are two approaches to enhancement of cleaning and sanitation of equipment. These approaches can be distinguished on the basis of the measures they use: passive or active.

PASSIVE MEASURES

Traditional sanitary design measures stem from techniques designers use to reduce hazards associated with harmful pathogens by decreasing the potential for contamination to develop. These measures are passive in the sense that they are sanitary by nature, rather than being involved in actually cleaning and sanitizing the equipment. An example would be the use of smooth, continuous welds with no pits for fastening joints of a machine, instead of using bolted joints. This eliminates crevices from the mating areas associated with bolted joints as well as the holes and spaces created by use of fasteners. By eliminating crevices in a machine, the locations in which contaminants can accumulate are reduced and the areas that are typically difficult to clean are minimized. This brings the equipment closer toward the highly desirable sanitary goal of freedom from harborages.

Additional passive sanitary measures include use of corrosive-resistant materials, proper radii in corners, and smooth product contact surfaces, as well as configuring the structure of the machine so as to avoid accumulation of dirt and liquids and facilitate cleaning. Proper application of passive sanitary design measures reduces the risk of introduction of harmful pathogens by designing the potential for contamination out of the machine, in addition to enhancing cleanability. This, in effect, translates to "engineering out" potential problem areas in the equipment that might have required monitoring or special attention in a hazard analysis critical control points (HACCP) program.

A peer-reviewed article.

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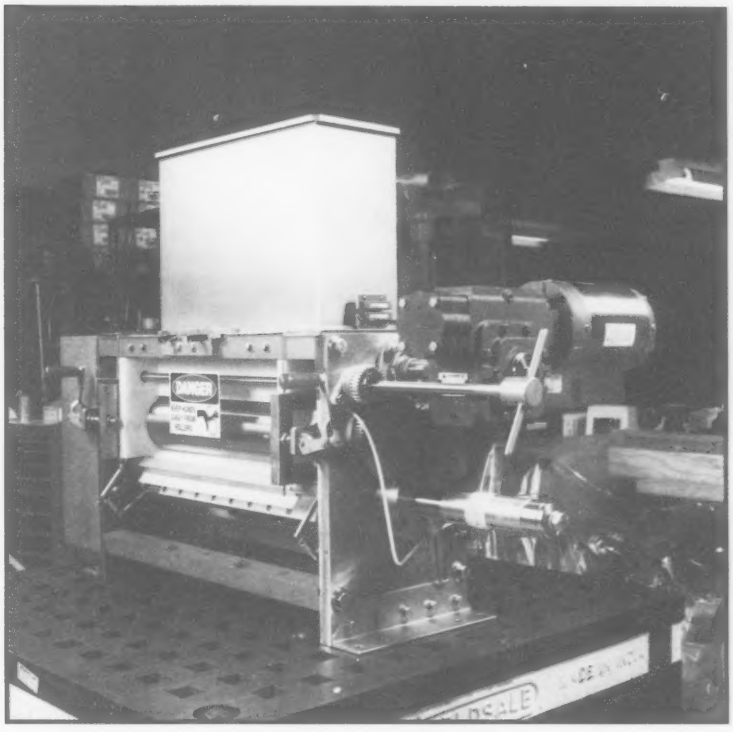
Fax: 517.432.0976; E-mail: satokenj@cvm.msu.edu

International Association for Food Protection.

Figure 1. DEMACO Sanitary Sheet Former



Many sanitary equipment design standards, such as those developed by the National Sanitation Foundation (NSF) International, 3-A Sanitary Standards Committees or the Baking Industry Sanitation Standards Committee (BISSC), describe in great detail criteria for good sanitary design and construction of food equipment. Interestingly, passive measures applied in sanitary design of food equipment and design for manufacture (DFM) go hand in hand. DFM is a process used during mechanical design in which, among other things, each individual part of a machine is closely examined and scrutinized for utility and simplification so that the overall parts structure is streamlined. Generally, the techniques used in the DFM process also improve cleaning and sanitation aspects of machinery design. For example, simplifying the parts on a machine and eliminating unnecessary ones, both considered fundamental tenets of the DFM process, also lead to fewer places for pathogens to develop and fewer items or areas to clean.

ACTIVE MEASURES

Equipment used in the food industry commonly has features deliberately built in to actively assist in the cleaning of the machine or parts of it. Usually, these features are designed into machines for the sole purpose of enhancing cleaning and sanitation and have no influence on its production output rate. Because these features play an active role in equipment cleaning and sanitation, they are classified as active measures used in the cleaning and sanitation process. Generally, they are mechanical components or systems incorporated into the equipment that clean and sanitize it while it is in operation or make it easier to clean during the cleaning and sanitation phase.

It is important to distinguish these features from passive ones, as they play an active role in the cleaning and sanitizing process, whereas passive ones relate to the application of good sanitary design criteria to reduce the potential for introduction or development of harmful pathogens. Early examples of active measures used in sanitary design of food equipment are rollers with built-in scrapers to keep the rollers clean, or the use of strainers, filters and magnets. More recently, Clean-In-Place (CIP) systems as well the use of irradiation systems in which food is exposed to radiant energy to reduce or eliminate bacteria, have received a high degree of industry attention and there has been tremendous growth in technology in these areas.

Modern designers are increasingly aggressive in designing active sanitary features. A simple example that illustrates active sanitary measures used on food equipment is seen on this page, which has several features built in to assist in cleaning. First, the side plates spread apart when toggle clamps are released, allowing the operator better access to the sides of the rollers. Additionally, one of the three rollers is on an eccentric housing that spreads the rollers apart as an adjustment handle is rotated. This provides complete access to the rollers, so that the operator can clean them thoroughly. All of these features were specifically added to this machine to make it easier to clean.

CONCLUSION

Every step taken to enhance cleaning and sanitation of food equipment directly influences the degree of adulteration of the products that are produced on that machine. Thus, both active and passive measures used for cleaning and sanitation of food equipment are important considerations for equipment designers, as they both impact the overall sanitary performance of the equipment. Moreover, the two should act in concert to achieve a synergistic effect. Indeed, it is the skillful application of both passive and active measures that results in optimal sanitary equipment design.

Leonard J. DeFrancisci is the Operations Manager for DEMACO, a designer and manufacturer of food equipment with a concentration in the pasta industry and a specialty in sanitary designs.

CALL FOR SYMPOSIA

IAFP 2003

AUGUST 10–13, 2003

NEW ORLEANS, LOUISIANA

The Program Committee invites International Association for Food Protection Members and other interested individuals to submit a symposium proposal for presentation during the 2003 Annual Meeting, August 10-13, 2003 in New Orleans, Louisiana.

WHAT IS A SYMPOSIUM?

A symposium is an organized, half-day session emphasizing a central theme relating to food safety and usually consists of six 30-minute presentations by each presenter. It may be a discussion emphasizing a scientific aspect of a common food safety and quality topic, issues of general interest relating to food safety and quality, a report of recent developments, an update of state-of-the-art materials, or a discussion of results of basic research in a given area. The material covered should include current work and the newest findings. Symposia will be evaluated by the Program Committee for relevance to current science and to Association Members.

SUBMISSION GUIDELINES

To submit a symposium, complete the Symposium Proposal form in its entirety. When submitting a proposal, the presenters do not need to be confirmed, only identified. Confirmation of presenters takes place after acceptance of your symposium.

SYMPOSIUM FORMAT

Symposium sessions are 3 and 1/2 hours in length including a 30-minute break. A typical format is six 30-minute presentations. However, variations are permitted as long as the changes fit within the allotted time frame. If varying from the standard format, be sure to indicate this on the Symposium Proposal form.

SYMPOSIUM PROPOSAL DEADLINE

Proposals may be submitted by mail to the International Association for Food Protection office for receipt no later than June 14, 2002 or by presenting the proposal to the Program Committee at its meeting on Sunday, June 30, 2002 in San Diego, California. Proposals may be prepared by individuals, committees, or professional development groups.

The Program Committee will review submitted symposia and organizers will be notified in August 2002 as to the disposition of their proposal.

PRESENTERS WHO ARE NOT MEMBERS

International Association for Food Protection does not reimburse invited presenters for travel, hotel, or other expenses incurred during the Annual Meeting. However, invited presenters who are not Association members will receive a complimentary registration. Presenters who are Association Members are expected to pay normal registration fees.

ASSOCIATION FOUNDATION SPONSORSHIP

The International Association for Food Protection Foundation has limited funds for travel sponsorship of presenters. After formal acceptance of the symposium, symposia organizers may make requests in writing to the Program Committee Chairperson. Requests are reviewed on an individual and first-come-first-served basis. The maximum funding grant will be $500 per symposium. Organizers are welcome to seek funding from other sources and the Association will provide recognition for these groups in our program materials. Organizers are asked to inform the Association if they obtain outside funding.

HAVE AN IDEA BUT YOU ARE UNABLE TO ORGANIZE IT?

Many Association Members have excellent suggestions for symposia topics, but are unable to organize the session. Such ideas are extremely valuable and are welcome. If you have an idea for a symposium topic, please inform the Program Committee Chairperson as soon as possible. Symposium topics are among the most valuable contribution an Association Member can make to enhance the quality of our Annual Meeting.

WHO TO CONTACT:

Bev Corron
International Association for Food Protection
6200 Aurora Ave., Suite 200W
Des Moines, IA 50322-2864, USA
Phone: 800.369.6337; 515.276.3344
Fax: 515.276.8655
E-mail: bcorron@foodprotection.org

SYMPOSIUM PROPOSAL

IAFP 2003

AUGUST 10–13, 2003

NEW ORLEANS, LOUISIANA

Title: _____

Organizer's Name: _____

Address: _____

Phone: _____ Fax: _____ E-mail: _____

Topic – Suggested Presenter, Affiliation

(Example: 1. HACCP Implementation – John Smith, University of Georgia)

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Suggested Convenors:

_____

_____

Description of Audience: _____

Signature of Organizer: _____

Submit by mail by June 14, 2002 to:	International Association for Food Protection Symposium Proposal 6200 Aurora Ave., Suite 200W Des Moines, IA 50322-2864, USA
Submit in person on June 30, 2002 to:	Program Committee Meeting IAFP 2002, the Association's 89th Annual Meeting San Diego, California
or Contact:	Bev Corron International Association for Food Protection 6200 Aurora Ave., Suite 200W Des Moines, IA 50322-2864, USA Phone: 800.369.6337; 515.276.3344 Fax: 515.276.8655 E-mail: bcorron@foodprotection.org

New Members

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Robert Chrysanthou
Earth Tech Inc.
Calgary, Alberta

Serhiy Hlamazda
Better Beef Limited
Guelph, Ontario

Sandra J. Jones
OMAFRA
Guelph, Ontario

Ray B. McDonald
Grantham Foods Ltd.
Burnaby, British Columbia

Robert Serapiglia
Macgregors Meat & Seafood Ltd.
Toronto, Ontario

GREECE

Anastasia Badeka
University of Ioannina
Ioannina

SOUTH AFRICA

Robyn Wallace
Pick 'n Pay Retailers
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Foothill Ranch

Martin R. Thomas
TMR Inc.
Los Osos

Colorado

Jennifer I. Stefanek
Colorado State University
Fort Collins

Georgia

Mitchell L. Cohen
Center for Disease Control
and Prevention, Atlanta

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King of Prussia

Texas

Zaira D. Rodriguez
Houston

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Rick Meier
Marva Maid Dairy
Newport News

Christine L. Piotrowski
Virginia Polytechnic Institute
and State University, Roanoke

Washington

Larry W. Dutton
Trident SFDS
Anacortes

Wisconsin

Jim Foy
Degussa BioActives
Waukesha

Goeff Marcks
Grande Cheese Co.
Brownsville

Wyoming

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Powell

YUGOSLAVIA

Nenad Djurkovic
Kula Serbia

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bioMérieux, Inc., Hazelwood, MO; 800.638.4835

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Barry S. Michaels
Georgia-Pacific Technology Center
Palatka, Florida

New Members

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Robert Chrysanthou
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Foothill Ranch

Martin R. Thomas
TMR Inc.
Los Osos

Colorado

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Colorado State University
Fort Collins

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Mitchell L. Cohen
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Brian K. Mayer
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bioMérieux, Inc., Hazelwood, MO; 800.638.4835

New Sustaining Member

Barry S. Michaels
Georgia-Pacific Technology Center
Palatka, Florida

UpDates

Kathy Davis Joins Burke as Food Scientist

Kathy Davis has joined Burke Corporation's research and development team as a food scientist. Burke Corporation is located in Nevada, IA.

Davis will contribute to overall efforts, new product formulations, cost formulations, and nutritional information. Her product development efforts will focus on fully cooked meat fillings, shredded meats, sliced sandwich meats, and non-traditional fully cooked meat toppings and fillings.

Davis recently received her master's degree in meat science and technology from Iowa State University, where she also graduated with a bachelor's degree in animal science.

Alfa Laval Names New Project Coordinator and Communications Manager

Alfa Laval Inc. announces the appointment of Kim Marchant to the position of project coordinator in the inside sales department at the Pleasant Prairie, WI facility.

In this position, Kim will be responsible for project coordination and quotations concerning the company's new mix-proof valve product line. Kim will also continue to be the primary contact for two of the company's direct accounts.

Prior to accepting this new position, Kim held the position of inside sales representative for Alfa Laval Inc. She has been with the company for 7 1/2 years and has 14 years of industry experience.

Stephanie Jarstad has been appointed to the position of communications manager in the Pleasant Prairie, WI facility.

In this position, Stephanie will be responsible for developing effective marketing communications platforms and programs aimed at further strengthening and growing the company's position as the market leader in the USA sanitary flow industry.

Prior to joining Alfa Laval, Stephanie was marketing director at Alloc, Inc. where she worked extensively with both business-to-business and consumer marketing, product launch activities, global marketing communications and indirect sales channel support.

Stephanie holds a bachelor's degree in marketing from Carthage College.

IFT Names President and President-Elect

Philip E. Nelson, Ph.D., professor and head of the department of food science at Purdue University, has assumed the title and responsibilities of president of the Institute of Food Technologists, as previously elected by a vote of its members.

Nelson assumed the responsibilities of IFT president in September, 2001, ascending from his elected one-year appointment as IFT president-elect. Nelson replaces Mary K. Schmidl, Ph.D., to become the Institute's 62nd president.

Nelson earned a bachelor's degree in agriculture and a doctorate in food technology from Purdue University. In 1984, he was appointed head of the university's new department of food science.

Mark R. McLellan, Ph.D., director and professor, Institute of Food Science and Engineering, Texas A&M University–College Station, has been elected president-elect. McLellan will ascend to the IFT presidency in September, 2002, after serving his one-year term as president-elect.

McLellan received a bachelor's degree in food science from University of Massachusetts in 1976, a master's degree from Michigan State University in 1978, and a doctorate from MSU in 1981. His other memberships include: American Frozen Food Institute, Phi Tau Sigma, Sigma Xi, and Instrument Society of America.

John Delmage Named President of Fristam Pumps

John Delmage was recently appointed president of Fristam Pumps, Middleton, WI by Wolfgang Stamp, Fristam's CEO and chairman of the board. John has been with the company for 8 years and previously held the posititons of general manager and vice president of sales and marketing.

Along with ten years of additional experience, John holds a B.A. degree from Albany State University in Albany, NY.

Paul Hall Receives the International Life Sciences Institute N.A. (ILSI N.A.) Movers & Shakers Award

Paul A. Hall received the ILSI N.A. Movers & Shakers Award on Jan. 20, 2002. The award was established to recognize volunteers who have made significant contributions to ILSI N.A. activities through service on technical or project committees or subcommittees. The award is presented on an annual basis to individuals who have been instrumental in the success of ILSI N.A. programs.

Paul joined Kraft Foods Technology center in Glenview, IL in 1989. In 1994, he asssumed his current position as director of microbiology and food safety for Kraft Foods North America.

Paul is past chair and currently a member of the ILSI N.A. Technical Committee on Food Microbiology. In addition, he has been actively serving on the Steering Committee for Research Grant Evaluation. He has chaired serveral ILSI-sponsored symposia at the IAFP Annual Meetings and has been a true advocate of advancing scientific research and methods. He is recognized as one of the leaders of the food industry and is trying proactively to move the industry forward in areas of food safety. Paul currently serves as the Vice President of the International Association (IAFP) for Food Protection.

Paul holds a B.A. degree in microbiology from the University of Missouri-St. Louis and a M.S. degree in technology management from Washington University in St. Louis, MO. He is currently pursuing a Ph.D. degree in quality systems management at LaSalle University.

It's Finally Here — The 2001 FDA Food Code

The 2001 USFDA Food Code is available free of charge to download or print out from the Internet, all 450 pages. It consists of 8 chapters and 7 annexes. Anyone interested in safe food or is considering setting up a food establishment – this is well worth reading. While it is the US Food Code it would appear to be eminently suitable for most jurisdictions.

The annexes also contain some good advice on hiring and interviewing staff. It's located at the following Web site: www.cfsan.fda.gov/~dms/fc01-toc.html. It consists of 20 HTML files and one pdf file and is approximately 1.4 MB of data. Or the complete document can be downloaded into 21 pdf files. Get the latest version of Acrobat Reader first if you do not already have it installed. Available free from: www.adobe.com/acrobat.

International Association for Food Protection

First Meeting of the Committee on Review of the Use of Scientific Criteria and Performance Standards for Safe Food

The Institute of Medicine (IOM), through its Food and Nutrition Board (FNB), and the National Research Council (NRC), through its Board on Agriculture and Natural Resources, will conduct a 14-month study that will review the scientific basis for criteria for food and food ingredients. An ad hoc oversight committee will define the relationship between public health objectives and a Hazard Analysis and Critical Control Point (HACCP)-based approach to food safety; define the terms "performance standards" and "criteria" as related to food products and processes; recommend guidelines for determining the type of data that should be used in developing food safety criteria, including microbiological performance standards; and oversee the development of two reports on the use of scientific-based criteria in relation to performance standards and HACCP: (a) One on raw and processed meat and poultry, and (b) a second one on raw and processed seafood, produce and related products, and dairy products. Two subcommittees, one on meat and poultry and one on seafood, produce and related products, and dairy products, will produce a report that evaluates the role of scientifically determined criteria, including microbiological criteria, in the production and regulation of the food groups under its charge. Specifically, they will review the extent to which microbiological performance standards are appropriate means of ensuring the safety of these products in a HACCP-based system; evaluate the scientific bases for existing USDA or FDA microbiological performance standards; and recommend improvements.

Agency Initiative Gives Specialist Cheesemakers a Boost

The UK Food Standards Agency has launched a food safety management awareness initiative aimed at the producers of specialist cheeses such as classic Cheddars, traditional Stiltons and crumbly Cheshires. British consumers spend around £1.5bn generally on all types of cheese each year, and eat more than 590,000 tons.

There are around 450 different specialist British cheeses available today, made by 180 specialist producers. Many of these are small-scale businesses. Their products are often produced on farms from small herds

or flocks using time-honored methods involving open vats, hand-stirring, bandaging, and waxing.

The Agency, working with the Specialist Cheesemakers' Association (SCA) and other stakeholders, will promote best practice to help specialist cheesemakers continue to produce cheeses safely, and to the highest standards. The initiative was devised at the request of the cheesemakers to help maintain an organized approach to analyzing hazards and managing food safety. The cornerstone of the initiative is a Workbook which has been designed to reduce the burdens of food safety planning and paperwork by systematically documenting production systems and identifying food safety hazards and appropriate controls. Production systems are required to be adequately documented and recorded by law. It is important that hazards associated with specialist cheesemaking are identified and managed in a structured way throughout the stages of production.

Producers and environmental health officers will work together with consultants to complete the Workbook, which will address issues such as clean milking; the risk of cross contamination from livestock for cheeses produced on farm; the control of bacteria in raw or pasteurized milk; contamination from poor hygiene practice and the environment; survival of pathogens from incorrect cheese acidification, temperature controls and preservation techniques.

Sir John Krebs, chairman of the Food Standards Agency, speaking at the launch event where specialist cheeses were displayed and tasted said, "there has been a revolution in the British cheese industry in the last 15 years, with old recipes revived, new ones created and rare types re-established. We want to ensure that this extraordinary diversity and the superb quality of British cheeses continues to be maintained. We know that specialist cheesemakers demonstrate time and again a real passion for their craft. The Food Safety Management system gives them a practical way in which to demonstrate excellence in standards of production and hygiene and to provide continued assurance to cheese-loving consumers. I strongly urge cheesemakers and enforcement authorities to take advantage of this opportunity to work together."

Pasteurized or Fresh-Pressed? Consumers Can't De-Cider

Which tastes better: pasteurized or fresh-pressed cider? According to a series of Ohio State University consumer surveys, it's a split decision. That's promising news for Ohio State researchers, who have been working to make cider safer to drink while maintaining its taste quality. "Half of the consumers surveyed preferred the pasteurized cider because they said it tasted sweet and mellow. Half liked the fresh-pressed cider because it had a tart, fresher taste to it. I suppose it just all depends on what the palate likes," said Joe Scheerens, fruit specialist at the Ohio Agricultural Research and Development Center (OARDC) in Wooster, OH.

Over a three-year period, Scheerens and other Ohio State researchers, like horticulturist Diane Miller, conducted taste tests on consumers to determine whether pasteurized cider held up to consumer expectations of how a good cider should taste.

Pasteurization, the process of heating a product to a certain temperature to render bacteria harmless, is becoming a more common sanitation practice in juice production because it kills such foodborne pathogens as *E. coli*. But research has shown that pasteurization changes the flavor of foods, which may affect their success on the market.

"Data shows that pasteurization does change the quality of cider, but the difference is so slight that it doesn't seem to change the consumers' acceptability of the product. What is physically happening we don't know yet, but we hope to find that out this summer in future studies," Scheerens said.

Searching for that perfect cider will continue with another taste test at the Ohio Fruit and Vegetable Growers Congress and Ohio Roadside Marketing Conference, Feb. 6-8 in Toledo, OH. A consumer panel of judges will sample 19 cider entries from cider processors across Ohio and vote on various characteristics, such as taste and color. In addition, the cider will be analyzed for bacteria and mold counts, and its overall chemical content.

"The information provided is meant to educate producers about how consumers perceive their product, its relative safety and its physical and chemical characteristics. It's a way of maintaining and improving the quality of the product," Scheerens said.

According to the Ohio Department of Agriculture, Ohio ranks 10th in the nation in cider production, producing more than 10 million gallons per year. Cider production ranks second in the state among fruit commodities at roughly $25 million, behind fresh apples, which are estimated at $30 million. Of the 3 million bushels of apples grown annually in Ohio, up to 40 percent – or 1.2 million bushels – are used in cider production, at an estimated retail value of $15 million. Additionally, cider produced in Ohio from out-of-state apples has an annual estimated value of $10 million.

The Ohio Fruit and Vegetable Growers Congress and Ohio Roadside Marketing Conference is designed to provide fruit and vegetable growers the latest in research information, food safety and labor regulations, and economic opportunities. The conference is sponsored by Ohio State

University, Ohio Vegetable and Potato Growers Association, Ohio Fruit Growers Society, and the Direct Agricultural Marketing Association of Ohio.

Weaknesses in Meat and Poultry Inspection Pilot

USDA's original objective in implementing the pilot project was to test whether a prevention-oriented inspection system that uses plant personnel to examine each carcass for safety and quality and USDA inspectors to verify that safety and quality standards are met can provide a level of product safety and quality equal to or better than traditional inspections. At 11 chicken and 3 hog plants that are voluntarily participating in the before and after phases of the project, plant personnel, instead of USDA inspectors, initially determine which carcasses and parts are unacceptable and should be removed from the slaughter line because they are diseased or unwholesome. USDA is, therefore, able to use fewer inspection personnel at these plants. Using safety and quality performance standards developed for the project, an independent contractor measured how well pilot plants' inspection systems performed against these standards. The contractor measured how well USDA inspectors identified carcass defects under traditional inspections and then conducted similar measurements once plant personnel assumed those duties. Also, as a part of the pilot project, USDA inspectors at the project plants have examined carcasses to evaluate how well plant employees detect carcass defects. USDA will analyze these data to determine if at least the same level of safety and quality is maintained under the modified inspections. USDA has announced that preliminary results from the chicken pilot project show that plants' inspection systems perform better under the modified inspections, and that it expects to propose regulations to modify its slaughter inspection system for all chicken plants early in 2002. Both Australia and Canada have recently tested and adopted modified inspection programs that resemble USDA's pilot project in that they include the replacement of some government inspectors with plant personnel.

For full article go to www.gao.gov/cgi-bin/getrpt?gao-02-59.

New "Virtual Laboratory" Connects Researchers, Industry to Microbial Models

A new "virtual laboratory" Web site established by the Agricultural Research Service will help facilitate research cooperation among scientists studying a key food safety issue—how pathogenic bacteria behave in food under varying environmental conditions.

The ARS Eastern Regional Research Center (ERRC) in Wyndmoor, PA, established the site to form partnerships that advance the use of predictive models of microorganisms in food. The web site is called the Center of Excellence in Microbial Modeling and Informatics (CEMMI). Predictive microbiology is a growing field that estimates the behavior of microorganisms in response to environmental conditions, including food production and processing operations from the farm to table. For more than 15 years, ERRC has developed mathematical models to estimate the behavior of bacterial pathogens in food.

CEMMI is intended to network the expertise of ERRC and other laboratories to researchers, and to link industry with model designers for solutions to current food safety and quality problems.

According to CEMMI Coordinator Mark L. Tamplin, the center hopes to enhance the way predictive models are developed and then applied, while ensuring that users properly interpret results. Predictive microbiology can also benefit from defining existing gaps in research data and enhancing uniformity in experimental designs, he says.

Currently, one CEMMI project between the United Kingdom's Institute for Food that will provide scientists with vast information to develop and validate models of microorganisms in food. In another CEMMI project, ERRC and Decisionalysis Risk Consultants, Inc., of Ottawa, Ontario, Canada, are working to develop an "expert system"—a type of computer program that guides predictive microbiology users in making balanced and reasonable decisions related to the behavior of pathogenic bacteria in food. The system uses analytical rules defined by experts in the field and incorporates ERRC's Pathogen Modeling Program (PMP) software to help users solve food safety problems.

CEMMI can now be viewed online at: www.arserrc.gov/cemmi. Interested collaborators are encouraged to contact CEMMI researchers to address their specific model needs. ARS is the chief scientific research agency of the U.S. Department of Agriculture.

Purdue Center Aims at Preventing, Detecting Food Contamination

In an effort to protect the nation's food supply from biological and chemical contaminants, Purdue University and U.S. Department of Agriculture (USDA) engineers and food scientists have teamed up to develop faster, more exact ways to detect possibly deadly substances. With research grants and a partnership with the USDA's Agricultural Research Service, Purdue has launched the Center for Food Safety Engineering focused on developing

methods to find, identify and eradicate microbes or chemicals.

"The Purdue Center for Food Safety Engineering is utilizing a multidisciplinary team to contribute to the science and technology needed to enhance food safety," said Michael Ladisch, a scientist in the center that includes work by nearly 90 university researchers.

The Centers for Disease Control and Prevention (CDC) estimates that 76 million cases of foodborne illness occur in the United States annually and claim approximately 5,000 lives and cost $7.7 billion or more. Although disease-causing bacteria accidentally can contaminate meat, fruit and vegetables at any stage, from the field through processing and storage, concern over food contamination has heightened since the Sept. 11 terrorist attacks on New York City and the Pentagon.

Health officials have long viewed the safety of the country's food as a prime concern, Ladisch said. Foodborne pathogens cause 325,000 hospitalizations yearly, according to the CDC. In fact, the Clinton Administration issued a "no tolerance" edict for *Listeria monocytogenes* in processed and ready-to-eat foods, such as hot dogs. *Listeria* is one of the most deadly of the biological food contaminants, with a fatality rate of about 20 percent.

One aspect of the task with which researchers must cope is the difficulty of tracing the source of foodborne illness. In addition, a minuscule amount of some pathogens, such as *Listeria*, can cause illness. So the center's scientists are investigating detection methods that not only are faster and more exact, but also require smaller bacteria-containing food samples to make an analysis.

Food science Associate Professor Richard Linton, as center director, leads the biochemists; molecular biologists; physicists; and biomedical, electrical, computer, agricultural and biological engineers. Their quest is to prevent microbial organisms such as *Salmonella* Enteritidis, *Listeria*, *Escherichia coli* O157:H7, *Campylobacter* and *Fusarium* from entering the food chain at any point, whether it's the farm gate, the processing plant or the consumer's table. The investigators come from five schools within the university – agriculture, consumer and family sciences, engineering, science, and veterinary medicine, and team with the USDA Agricultural Research Service scientists.

"The multidisciplinary center provides an important platform for bringing different scientific expertise together. With this collection of creative minds working together, new and exciting research approaches are being developed and studied. This is an important step for solving complex food safety problems and, most importantly, for protecting the health of consumers," said Linton, a microbiologist.

European Food Safety Authority Becomes a Reality

In December 2001, Eurosurveillance Weekly reported on the approval by the European Parliament of the creation of an independent European Food Safety Authority (EFSA). On January 21, 2002, the EFSA became a reality when the Council of Ministers adopted the key legislation that provides the legal basis for establishing the EFSA and general principles and requirements for European Union (EU) food law.

Immediately after the regulation 2002/178/EC had been adopted, the Commission initiated some of the practical measures that need to be taken. An interim team of Commission staff has started the process of appointing the management board and an executive director. They will also ensure the continuation of scientific advice until the EFSA scientific committee and the scientific panels of the authority are appointed. Temporary quarters have been found to house the EFSA in Brussels. The responsibilities of the EFSA will include the following:

- Provision of independent scientific advice to support EU action on food safety, including all stages of food production and supply.
- Scientific evaluation of risks to the food chain, and any matter that may have a direct or indirect effect on the safety of the food supply.
- Collection, analysis, and exchange of scientific data through networks.
- Safety evaluations of dossiers put forward by industry for EU level approval of substances or processes.
- Identification of emerging risks.
- Scientific support to the Commission, particularly in the case of a food safety crisis.
- Direct communication to the public on issues coming within its responsibility.
- EFSA will be included in the rapid alert system, which will remain, as it is now, managed by the Commission.

The authority could employ up to 250 people within three years to support EU food safety measures with sound scientific advice. Working closely with, but independent of the Commission, EFSA will assess risks to the food chain and advise the Commission, which is responsible for managing those risks.

Further information can be found on the EFSA Web site at www.efsa.eu.int.

Industry Products

AmeriVap Systems

New Cleaning and Sanitizing Systems from AmeriVap Systems

Hygienvapor systems deliver saturated dry steam at 300°F and at a pressure of 150 PSI. Being a state of aeriform aggregation, it has remarkable propagation capacity even in places that are difficult to reach on machines, production lines, conveyors, tools, working environments, etc. The systems rapidly and economically solve problems of sanitizing, cleaning, washing, degreasing, as well as reducing the disposal of liquid waste. Leaves surfaces dry and sanitized. Does not alter flavor and integrity of food products. Destroys pathogenic microorganisms without using antibacterial agents. Water savings, chemical reduction, portable, self-contained with chemical injector and vacuum.

AmeriVap Systems, Atlanta, GA

Reader Service No. 359

TotalStat® Liquid Coating Systems Deliver Uniform Spray to Baking Surfaces, Food Products and Dairy Processes

TotalStat® liquid coating systems use electrostatic principles to spray release agents, specialty oils and post-bake oils in a precise and uniform manner. TotalStat coats baking surfaces such as oven bands, bread pans, cake pans and muffin pans with release agents and sprays products such as breads, cakes, crackers, processed cheeses and snacks for the dairy & food industry.

Developed and patented by United Air Specialists, Inc. (UAS), TotalStat provides repeatable, accurate liquid deposition with ultra-low spray capability to eliminate waste of valuable oil. As a reliable spray system that applies the same consistent coverage. TotalStat eliminates the need for mist collectors and requires less housekeeping maintenance – cutting overhead costs.

The patented TotalStat nozzle has no moving parts to wear out, uses no mechanical force (which causes over spray) and targets just the product, with uniform and precise edge-to-edge coverage. TotalStat sprays the exact amount of coating to meet the most stringent quality specifications.

TotalStat, Cincinnati, OH

Reader Service No. 360

Sigma-Aldrich Announces Two New EZview™ Red Affinity Gels for Protein Immunoprecipitation Affinity Capture Techniques

Sigma-Aldrich Corporation has developed two new EZview™ Red Affinity Gels (patents pending) to facilitate immunoprecipitation and other small scale affinity capture techniques commonly used to study protein expression, modification and protein-protein interactions.

The two new products, EZview Red Protein G Affinity Gel andEZview RedHIS- Select™ Nickel Affinity Gel, complement Sigma-Aldrich's position in antibodies, antibody-conjugates and affinity resins for the detection, purification, and characterization of proteins. The EZview Red Protein G Affinity Gel is utilized for the capturing of antibodies used in immunoprecipitation while the EZview Red HIS-Select Affinity Gel is used for the capturing of histidine-tagged recombinant proteins. EZview Red Affinity Gels are red-colored agarose affinity beads that are more clearly visible than standard, non-colored agarose affinity beads used in affinity-based molecular pull-down applications.

Sigma's EZview Red Affinity Gels demonstrate improved visibility reducing the possibility of accidental pellet aspiration during wash steps. This improve-

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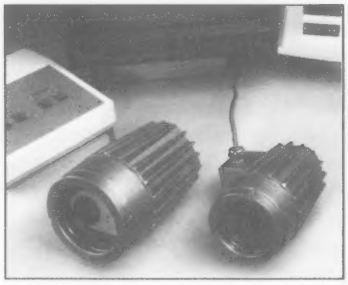
ment results in higher quality, more reproducible data. Most immunoprecipitation procedures have a number of washing steps, during which an affinity gel with specifically bound proteins undergoes centrifugation, and the resulting supernatant is aspirated from the affinity gel pellet. Unfortunately, most non-colored affinity gel pellets are whitish or translucent, making them very difficult to see in small polypropylene centrifuge tubes. Inadvertent aspiration of all or part of the gel pellet along with the supernatant is a very common problem resulting in a loss of valuable data.

Sigma-Aldrich, St. Louis, MO

Reader Service No. 361



L.J. Star Incorporated

L. J. Star Inc. Color Video Camera System Rated for Ex Service, Fixed or Zoom

A new line of color video monitoring systems from L.J. Star provides continuous real-time remote monitoring of reactors, tanks, critical processes or outdoor installations. Using either fixed or zoom lens cameras that are weatherproof and rated EX for hazardous locations, the systems provide 470-line (horizontal) resolution in either NTSC or PAL format. The controller and view screen may be located as much as 1000 meters from the camera mounting, with connection via common 6-conductor telephone cable.

Key specs for the camera include a 1/4-in CCD image scanner with 2.5 lux light sensitivity, yielding approximately 440,000-pixel displays. Noise is 48dB with a sensitivity range of 300:1. Operating conditions are -5° to 40°C (41° to 104°F). Protection is IP 65 and an EC-Type examination certificate has been applied for. A choice of five fixed lenses having focal lengths of 2.5 to 8.0 mm is available. The zoom lens covers 6 to 60 mm. The standard camera housing is aluminum alloy with stainless steel, an option for the fixed-lens models.

The control unit incorporates a 120 VAC power supply (230 VAC 50 Hz optional), the necessary input and output connections and signal conditioning electronics. Output is 75 ohm at 1 volt. Dimensions re 220 × 220 × 80 mm. (8.66 × 8.66 × 3.15-in.)

L.J. Star Incorporated, Twinsburg, OH

Reader Service No. 362

Nuclear Associates CAL/RAD Mark IV & CAL/RAD Mark V Ultimate "Intelligent" Radioisotope Dose Calibrators

Nuclear Associates now offers you a choice of two high-quality dose calibrators – the CAL/RAD MARK IV (model 34-162) and the CAL/RAD MARK V (model 34-164) Radioisotope dose calibrators. Whether you're looking for a high-quality unit that does a good, reliable job, or a more sophisticated unit that can be connected to a windows-based PC, our selection of cost-effective dose calibrators will always do the job dependably.

With the "user friendly" CAL/RAD Mark IV and CAL/RAD Mark V, you get: microprocessor controlled systems, accurate measurements, quick-response times, large backlit LCD displays, readouts in curies or becquerels, auto-ranging and sturdy construction.

In addition, the CAL/RAD MARK V provides you with an RS-232C interface for a PC or printer connection, 8 user "preset isotopes" that can be easily changed, 10 additional user-definable calibration factors and optional printer, battery-backup clock and remote LCD readout.

The pressurized ionization chamber of each unit has a deep well of high linearity. The chamber is lead-shielded and can be built into laminar flowbenches, isolators or glove boxes. The detector well-liner can be easily removed for decontamination.

Nuclear Associates, Hicksville, NY

Reader Service No. 363

seepex MAP® Pump

Seepex, Inc. has introduced a totally new pump design. The new MAP, multi-hose axial flow peristaltic pump, combines the best features of progressive cavity and peristaltic pump technologies. The patented design offers seal-less performance with fewer pulsations and longer hose life than conventional radial peristaltic designs.

The pump can transfer and meter up to six separate fluids simultaneously. Metering with ≤ 1% flow variation and 100:1 turndown ratios is possible. The product range includes four models with performance options to 17 USGPM and 90 PSIG. Product extensions for higher pressures are planned.

seepex, Inc., Enon, OH

Reader Service No. 364

New Micro-Mist Lubricators for Precision Pneumatic Applications from Parker Hannifin Corporation

Many pneumatic system components and most tools require oil lubrication for proper operation and long service life. This lubricant is typically carried by the air stream. Too little oil can cause excessive wear and premature failure. Too much oil is wasteful and can become a contaminant. Use of the proper lubricator can greatly extend the life of expensive downstream pneumatic equipment.

The 17L series Micro-Mist Lubricators offer proportional oil delivery over a wide range of air flows. The precision needle valve assures repeatable oil delivery and provides simple adjustment of delivery rate.

They are designed to generate oil droplets of 5 microns or smaller downstream to lubricate systems having complex piping arrangements. The 17L series are ideal for low and high flow applications with changing air flow.

Parker Hannifin Corp., Tewksbury, MA

Reader Service No. 365

Automatic Wastewater Treat Filter Systems from Serfilco

Serfilco Titan Series 'W' filtration systems for aqueous treated waste applications can be used to satisfy regulatory requirements for total suspended solids, with flow rates to 500 GPM. These units are typically used for capturing suspended solids escaping a facility's clarifier.

Each Series 'W' TITAN system employs permanent media and automatic backwashing to eliminate media replacement and maintenance labor. The units incorporate a corrosion resistant

Serfilco, Ltd.

epoxy lined steel chamber, PVC piping, electrically actuated valves, efficient centrifugal pump digital electronic flow meter, pre-wired control panel and pre-programmed microprocessor which automatically maintains constant design flow without compacting particles onto the media bed. The automatic backwash cycle, programmed for optimum use of backwash fluid, responds automatically to a preset minimum flow rate.

Serfilco, Ltd., Northbrook, IL

Reader Service No. 366

Labconco WaterPro® ROo's Station Features Fast Delivery and Timed Dispensing

Labconco Corporation offers the WaterPro RO Station for point of use production of laboratory grade reverse osmosis water.

The WaterPro RO Station's large capacity filters and membrane produce high-quality reverse osmosis (RO) purified water jet at a rate faster than any other laboratory system available. Water is produced on demand and may be dispensed at a typical rate of 1 liter per minute (at inlet water at 25°C). RO purified water is ideal for reagent preparation, general biotechnology work, and glassware rinsing. Water may be dispensed manually from a valve or an optional gun. The timed dispense feature allows unattended operation. Set the timer up to 99.9 minutes, press the dispense button and the valve dispenses until set time expires.

The integral 17 liter tank and an outlet port for connection to Labconco's SteamScrubber® or FlaskScrubber® Laboratory Glassware Washer holds ample volume to supply pure water for final rinse cycles.

The WaterPro RO may also be used to produce laboratory grade feedwater for final purification by a polishing system such as the WaterPro PS Polishing Station and to allow dispensing of both RO-purified and Type I water.

Labconco Corporation, Kansas City, MO

Reader Service No. 367

IQ Scientific Instruments Rugged Graphing/Data Logging Thermometer

The rugged 1Q3000 Graphing/Data Logging Thermometer combines the power of the hand-held computer with a two-channel thermocouple thermometer.

Data logs and graphs up to 10,000 points with user adjustable start time and sampling interval. Saves readings complete with date and time stamp, operator name, and even digitized handwritten notes. View MIN, MAX, AVG for each channel.

Data can be easily sent to a PC with the push of a button. Features include graphics display, pop-up windows and on-screen troubleshooting guides for each function. Runs all popular Palm OS™ operating system software applications.

IQ Scientific Instruments, Inc., San Diego, CA

Reader Service No. 368

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How It Works ...

1) Members simply fill out an order form (see page 280) and fax or mail it to the IAFP office. Members may also find a Library listing and an order form online at the IAFP Web site at www.foodprotection.org.

2) Material from the Audiovisual Library is checked out for a maximum of two weeks (three weeks outside of North America) so that all Members can benefit from its use.

3) Requests are limited to five videos at a time.

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1) As the IAFP Membership continues to grow, so does the need for additional committee members and materials for the Library. The Audiovisual Committee meets at the IAFP Annual Meeting to discuss the status of the Audiovisual Library and ways to improve the service. New Members are sought to add fresh insight and ideas.

2) Donations of audiovisual materials are always needed and appreciated. Tapes in foreign languages (including, but not limited to Spanish, French, Chinese [Manderin/Cantonese]), are especially desired for International Members who wish to view tapes in their native language.

3) Members may also make a financial contribution to the Foundation Fund. The Foundation Fund sponsors worthy causes that enrich the Association. Revenue from the Foundation Fund supports the IAFP Audiovisual Library. Call Lisa Hovey, Assistant Director or Lucia Collison McPhedran, Association Services at 800.369.6337 or 515.276.3344 if you wish to make a donation.

Audiovisual Library

as of March 1, 2002

A Member Benefit of IAFP

DAIRY

D1180 **10 Points to Dairy Quality**–(10 minute videotape). Provides in-depth explanation of a critical control point in the residue prevention protocol. Illustrated with on-farm, packing plant, and milk-receiving plant scenes as well as interviews of producers, practicing veterinarians, regulatory officials and others. (Dairy Quality Assurance–1992) (Reviewed 1998)

D1010 **The Bulk Milk Hauler: Protocol & Procedures**–(8 minute videotape). Teaches bulk milk haulers how they contribute to quality milk production. Special emphasis is given to the hauler's role in proper milk sampling, sample care procedures, and understanding test results. (Iowa State University Extension–1990). (Reviewed 1998)

D1030 **Cold Hard Facts**–This video is recommended for training personnel associated with processing, transporting, warehousing, wholesaling and retailing frozen foods. It contains pertinent information related to good management practices necessary to ensure high quality frozen foods. (National Frozen Food Association–1993) (Reviewed 1998)

D1040 **Ether Extraction Method for Determination of Raw Milk**–(26 minute videotape). Describes the ether extraction procedure to measure milkfat in dairy products. Included is an explanation of the chemical reagents used in each step of the process. (CA–1988) (Reviewed 1998)

D1050 **The Farm Bulk Milk Hauler**–(30 minute–135 slides–tape–script). This slide set covers the complete procedure for sampling and collecting milk from farms. Each step is shown as it starts with the hauler entering the farm lane and ends when he leaves the milk house. Emphasis is on universal sampling and automated testing. Funds to develop this set were provided by The Federal Order #36 Milk Market Administrator. (Penn State–1982) (Reviewed 1998)

D1060 **Frozen Dairy Products**–(27 minute videotape). Developed by the California Department of Food and Agriculture. Although it mentions the importance of frozen desserts, safety and checking ingredients; emphasis is on what to look for in a plant inspection. Everything from receiving, through processing and cleaning and sanitizing is outlined, concluded with a quality control program. Directed to plant workers and supervisors, it shows you what should be done. (CA–1987) (Reviewed 1997)

D1070 **The Gerber Butterfat Test**–(7 minute videotape). Describes the Gerber milkfat test procedure for dairy products and compares it to the Babcock test procedure. (CA–1990) (Reviewed 1998)

D1080 **High-Temperature, Short-Time Pasteurizer**–(59 minute videotape). Provided by the Dairy Division of Borden, Inc. It was developed to train pasteurizer operators and is well done. There are seven sections with the first covering the twelve components of a pasteurizer and the purpose and operation of each. The tape provides the opportunity for discussion after each section or continuous running of the videotape. Flow diagrams, processing and cleaning are covered. (Borden, Inc.–1986) (Reviewed 1997)

D1090 **Managing Milking Quality**–(33 minute videotape). This training video is designed to help dairy farmers develop a quality management process and is consistent with ISO 9000 certification and HACCP processes. The first step is to evaluate the strengths and weaknesses of a dairy operation. The video will help you find ways to improve the weaknesses that are identified on your farm.

D1100 **Mastitis Prevention and Control**–(2-45 minute videotapes). This video is ideal for one-on-one or small group presentations. Section titles include: Mastitis Pathogens, Host Defense, Monitoring Mastitis, Mastitis Therapy, Recommended Milking Procedures, Postmilking Teat Dip Protocols, Milk Quality, Milking Systems. (Nasco–1993)

D1110 **Milk Plant Sanitation: Chemical Solution**–(13 minute videotape). This explains the proper procedure required of laboratory or plant personnel when performing chemical titration in a dairy plant. Five major titrations are reviewed... alkaline wash, presence of chlorine and iodophor, and caustic wash and an acid wash in a HTST system. Emphasis is also placed on record keeping and employee safety. (1989)

D1120 **Milk Processing Plant Inspection Procedures**–(15 minute videotape). Developed by the California Department of Food and Agriculture. It covers pre- and post-inspection meeting with management, but emphasis is on inspection of all manual and cleaned in place equipment in the receiving, processing and filling rooms. CIP systems are checked along with recording charts and employee locker and restrooms. Recommended for showing to plant workers and supervisors. (CA–1986)

D1130 **Pasteurizer – Design and Regulation**–(16 minute videotape). This tape provides a summary of the public health reasons for pasteurization and a nonlegal definition of pasteurization. The components of an HTST pasteurizer, elements of design, flow-through diagram and legal controls are discussed. (Kraft General Foods–1990) (Reviewed 1998)

D1140 **Pasteurizer – Operation**–(11 minute videotape). This tape provides a summary of the operation of an HTST pasteurizer from start-up with hot water sanitization to product pasteurization and shut-down. There is an emphasis on the legal documentation required. (Kraft General Foods–1990) (Reviewed 1998)

D1150 **Processing Fluid Milk**–(30 minute–140 slides–script–tape). This slide set was developed to train processing plant personnel on preventing food poisoning and spoilage bacteria in fluid dairy products. Emphasis is on processing procedures to meet federal regulations and standards. Processing procedures, pasteurization times and temperatures, purposes of equipment, composition standards, and cleaning and sanitizing are covered. Primary emphasis is on facilities such as drains and floors, and filling equipment to prevent post-pasteurization contamination with spoilage or food poisoning bacteria. It was reviewed by many industry plant operators and regulatory agents and is directed to plant workers and management. (Penn State–1987) (Reviewed 1998)

ENVIRONMENTAL

E3010 **The ABCs of Clean–A Handwashing & Cleanliness Program for Early Childhood Programs**–For early childhood program employees. This tape illustrates how proper handwashing and clean hands can contribute to the infection control program in daycare centers and other early childhood programs. (The Soap & Detergent Association–1991)

E3020 **Acceptable Risks?**–(16 minute videotape). Accidents, deliberate misinformation, and the rapid proliferation of nuclear power plants have created increased fears of improper nuclear waste disposal, accidents during the transportation of waste, and the release of radioactive effluents from plants. The program shows the occurrence of statistically anomalous leukemia clusters; governmental testing of marine organisms and how they absorb radiation; charts the kinds and amounts of natural and man-made radiation to which man is subject; and suggests there is no easy solution to balancing our fears to nuclear power and our need for it. (Films for the Humanities & Sciences, Inc.–1993) (Reviewed 1998)

E3030 **Air Pollution: Indoor**–(26 minute videotape). Indoor air pollution is in many ways a self-induced problem...which makes it no easier to solve. Painting and other home improvements have introduced pollutants, thermal insulation and other energy-saving and water-proofing devices have trapped the pollutants inside. The result is that air pollution inside a modern home can be worse than inside a chemical plant. (Films for the Humanities & Sciences, Inc.) (Reviewed 1998)

E3040 **Asbestos Awareness**–(20 minute videotape). This videotape discusses the major types of asbestos and their current and past uses. Emphasis is given to the health risks associated with asbestos exposure and approved asbestos removal abatement techniques. (Industrial Training, Inc.–1988) (Reviewed 1998)

E3055 **Effective Handwashing–Preventing Cross-Contamination in the Food Service Industry**–(3 1/2 minute videotape). It is critical that all food service workers wash their hands often and correctly. This video discusses the double wash method and the single wash method and when to use each method. (Zep Manufacturing Company–1993)

E3060 **EPA Test Methods for Freshwater Effluent Toxicity Tests (Using Ceriodaphnia)**–(22 minute videotape). Demonstrates the Ceriodaphnia 7-Day Survival and Reproduction Toxicity Test and how it is used to monitor and evaluate effluents for their toxicity to biota and their impact on receiving waters and the establishment of NPDES permit limitations for toxicity. The tape covers the general procedures for the test including how it is set up, started, monitored, renewed and terminated. (1989) (Reviewed 1998)

E3070 **EPA Test Methods for Freshwater Effluent Toxicity Tests (Using Fathead Minnow Larva)**–(15 minute videotape). A training tape that teaches environmental professionals about the Fathead Minnow Larval Survival and Growth Toxicity Test. The method described is found in an EPA document entitled, "Short Term Methods for Estimating the Chronic Toxicity of Effluents & Receiving Waters to Freshwater Organisms." The tape demonstrates how fathead minnow toxicity tests can be used to monitor and evaluate effluents for their toxicity to biota and their impact on receiving waters and the establishment of NPDES permit limitations for toxicity. (1989) (Reviewed 1998)

E3075 **EPA: This is Super Fund**–(12 minute videotape). Produced by the United States Environmental Protection Agency (EPA) in Washington, D.C., this videotape focuses on reporting and handling hazardous waste sites in our environment. The agency emphasizes community involvement in identifying chemical waste sites and reporting contaminated areas to the authorities. The primary goal of the "Super Fund Site Process" is to protect human health and to prevent and eliminate hazardous chemicals in communities. The film outlines how to identify

and report abandoned waste sites and how communities can participate in the process of cleaning up hazardous sites. The program also explains how federal, state and local governments, industry and residents can work together to develop and implement local emergency preparedness/response plans in case chemical waste is discovered in a community.

E3080 **Fit to Drink**–(20 minute videotape). This program traces the water cycle, beginning with the collection of rain-water in rivers and lakes, in great detail through a water treatment plant, to some of the places where water is used, and finally back into the atmosphere. Treatment of the water begins with the use of chlorine to destroy organisms; the water is then filtered through various sedimentation tanks to remove solid matter. Other treatments employ ozone, which oxidizes contaminants and makes them easier to remove; hydrated lime, which reduces the acidity of the water; sulfur dioxide, which removes any excess chlorine; and floculation, a process in which aluminum sulfate causes small particles to clump together and precipitate out. Throughout various stages of purification, the water is continuously tested for smell, taste, titration, and by fish. The treatment plant also monitors less common contaminants with the use of up-to-date techniques like flame spectrometers and gas liquefaction. (Films for the Humanities & Sciences, Inc.–1987)

E3110 **Garbage: The Movie**–(25 minute videotape). A fascinating look at the solid waste problem and its impact on the environment. Viewers are introduced to landfills, incinerators, recycling plants and composting operations as solid waste management solutions. Problems associated with modern landfills are identified and low-impact alternatives such as recycling, reuse, and source reduction are examined. (Churchill Films) (Reviewed 1998)

E3120 **Global Warming: Hot Times Ahead**–(23 minute videotape). An informative videotape program that explores the global warming phenomenon and some of the devastating changes it may cause. This program identifies greenhouse gases and how they are produced by human activities. Considered are: energy use in transportation, industry and home; effects of deforestation, planting of trees and recycling as means of slowing the build-up of greenhouse gases. (Churchill Films–1995)

E3130 **Kentucky Public Swimming Pool & Bathing Facilities**–(38 minute videotape). Developed by the Lincoln Trail District Health Department in Kentucky and includes all of their state regulations which may be different from other states, provinces and countries. This tape can be used to train those responsible for operating pools and waterfront bath facilities. All aspects are included of which we are aware, including checking water conditions and filtration methods. (1987). (Reviewed 1998)

E3135 **Plastics Recycling Today: A Growing Resource**–(11:35 minute videotape). Recycling is a growing segment of our nation's solid waste management program. This video shows how plastics are handled from curbside pickup through the recycling process to end-use by consumers. This video provides a basic understanding of recycling programs and how communities, companies and others can benefit from recycling. (The Society of the Plastics Industry, Inc.–1988)

E3140 **Putting Aside Pesticides**–(26 minute videotape). This program probes the long-term effects of pesticides and explores alternative pest-control efforts; biological pesticides, genetically-engineered microbes that kill objectionable insects, the use of natural insect predators, and the cross-breeding and genetic engineering of new plant strains that produce their own anti-pest toxins. (Films for the Humanities & Sciences, Inc.) (Reviewed 1999)

E3150 **Radon**–(26 minute videotape). This program looks at the possible health implications of radon pollution, methods home-owners can use to detect radon gas in their homes, and what can be done to minimize hazards once they are found.

E3160 **RCRA–Hazardous Waste**–(19 minute videotape). This videotape explains the dangers associated with hazardous chemical handling and discusses the major hazardous waste handling requirements presented in the Resource Conservation and Recovery Act. (Industrial Training, Inc.)

The New Superfund. What It is & How It Works–A six-hour national video conference sponsored by the EPA. Target audiences include the general public, private industry, emergency responders and public interest groups. The series features six videotapes that review and highlight the following issues:

E3170 **Tape 1–Changes in the Remedial Process: Clean-up Standards and State Involvement Requirements**–(62 minute videotape). A general overview of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and the challenge of its implementation. The remedy process – long-term and permanent clean-up is illustrated step-by-step, with emphasis on the new mandatory clean-up schedules, preliminary site assessment petition procedures and the hazard ranking system/National Priority List revisions. The major role of state and local government involvement and responsibility is stressed.

E3180 **Tape 2–Changes in the Removal Process: Removal and Additional Program Requirements**–(48 minute videotape). The removal process is a short-term action and usually an im-

mediate response to accidents, fires and illegal dumped hazardous substances. This program explains the changes that expand removal authority and require procedures consistent with the goals of remedial action.

E3190 **Tape 3–Enforcement & Federal Facilities**–(52 minute videotape). Who is responsible for SARA clean-up costs? Principles of responsible party liability; the difference between strict, joint and several liability; and the issue of the innocent land owner are discussed. Superfund enforcement tools-mixed funding, De Minimis settlements and the new nonbinding preliminary allocations of responsibility (NBARs) are explained.

E3210 **Tape 4–Emergency Preparedness & Community Right-to-Know**–(48 minute videotape). A major part of SARA is a free-standing act known as Title III: The Emergency Planning and Community Right-to-Know Act of 1986, requiring federal, state, and local governments and industry to work together in developing local emergency preparedness/response plans. This program discusses local emergency planning committee requirements, emergency notification procedures, and specifications on community right-to-know reporting requirements such as using OSHA Material Safety Data Sheets, the emergency & hazardous chemical inventory and the toxic chemical release inventory.

E3220 **Tape 5–Underground Storage Tank Trust Fund & Response Program**–(21 minute videotape). Another addition to SARA is the Leaking Underground Storage Tank (LUST) Trust Fund. One half of the US population depends on ground water for drinking–and EPA estimates that as many as 200,000 underground storage tanks are corroding and leaking into our ground water. This program discusses how the LUST Trust Fund will be used by EPA and the states in responding quickly to contain and clean-up LUST releases. Also covered is state enforcement and action requirements, and owner/operator responsibility.

E3230 **Tape 6–Research & Development/ Closing Remarks**–(33 minute videotape). An important new mandate of the new Superfund is the technical provisions for research and development to create more permanent methods in handling and disposing of hazardous wastes and managing hazardous substances. This segment discusses the SITE (Superfund Innovative Technology Evaluation) program, the University Hazardous Substance Research Centers, hazardous substance health research and the DOD research, development and demonstration management of DOD wastes.

E3240 **Sink A Germ**–(10 minute videotape). A presentation on the rationale and techniques for effective handwashing in health care institutions. Uses strong imagery to educate hospital personnel that handwashing is the single most important means of preventing the spread of infection. (The Brevis Corp.–1986). (Reviewed 1998)

E3245 **Wash Your Hands**–(5 minute videotape). Handwashing is the single most important means of preventing the spread of infection. This video presents why handwashing is important and the correct way to wash your hands. (LWB Company–1995)

E3250 **Waste Not: Reducing Hazardous Waste**–(35 minute videotape). This tape looks at the progress and promise of efforts to reduce the generation of hazardous waste at the source. In a series of company profiles, it shows activities and programs within industry to minimize hazardous waste in the production process. Waste Not also looks at the obstacles to waste reduction, both within and outside of industry, and considers how society might further encourage the adoption of pollution prevention, rather than pollution control, as the primary approach to the problems posed by hazardous waste. (Umbrella films)

FOOD

F2260 **100 Degrees of Doom... The Time & Temperature Caper**–(14 minute videotape). Video portraying a private eye tracking down the cause of a *Salmonella* poisoning. Temperature control is emphasized as a key factor in preventing foodborne illness. (Educational Communications, Inc.–1987) (Reviewed 1998)

F2450 **A Guide to Making Safe Smoked Fish**–(21 minute videotape). Smoked fish can be a profitable product for aquaculturalists, but it can be lethal if not done correctly. This video guides you through the steps necessary to make safe smoked fish. It provides directions for brining, smoking, cooling, packaging and labeling, and cold storage to ensure safety. The video features footage of fish smoking being done using both traditional and modern equipment. (University of Wisconsin-Madison–Spring, 1999)

F2005 **A Lot on the Line**–(25 minute videotape). Through a riveting dramatization, "A Lot on the Line" is a powerful training tool for food manufacturing and food service employees. In the video, a food plant supervisor and his pregnant

wife are eagerly awaiting the birth of their first child. Across town, a deli manager is taking his wife and young daughter away for a relaxing weekend. Both families, in a devastating twist of fate, will experience the pain, fear, and disruption caused by foodborne illness. This emotionally charged video will enthrall new and old employees alike and strongly reinforce the importance of incorporating GMPs into everyday work routines. Without question, "A Lot on the Line" will become an indispensable part of your company's training efforts. (Silliker Laboratories–2000)

F2007 **The Amazing World of Microorganisms**–(12 minute videotape). This training video provides your employees with an overview of how microorganisms affect their everyday lives and the foods they produce. The video explores how microscopic creatures are crucial in producing foods, fighting disease, and protecting the environment. In addition, certain microorganisms–when given the proper time and conditions to grow–are responsible for food spoilage, illness, and even death. Equipped with this knowledge, your employees will be better able to protect your brand. (Silliker Laboratories Group, Inc., Homewood, IL– 2001)

F2440 **Cleaning & Sanitizing in Vegetable Processing Plants: Do It Well, Do It Safely!**–(16 minute videotape) This training video shows how to safely and effectively clean and sanitize in a vegetable processing plant. It teaches how it is the same for processing plant as it is for washing dishes at home. (University of Wisconsin Extension–1996) (Available in Spanish)

F2010 **Close Encounters of the Bird Kind**–(18 minute videotape). A humorous but in-depth look at *Salmonella* bacteria, their sources, and their role in foodborne disease. A modern poultry processing plant is visited, and the primary processing steps and equipment are examined. Potential sources of *Salmonella* contamination are identified at the different stages of production along with the control techniques that are employed to insure safe poultry products. (Topek Products, Inc.) (Reviewed 1998)

F2015 **Controlling *Listeria*: A Team Approach**–(16 minute videotape). In this video, a small food company voluntarily shuts down following the implication of one of its products in devastating outbreak of *Listeria monocytogenes*. This recall dramatization is followed by actual in-plant footage highlighted key practices in controlling *Listeria*. This video provides workers with an overview of the organism, as well as practical steps that can be taken to control its growth in plant environments. Finally, the video leaves plant personnel with a powerful, resounding message: Teamwork and commitment are crucial in the production of safe, quality foods. (Silliker Laboratories–2000)

F2037 **Cooking and Cooling of Meat and Poultry Products**–(2 videotapes – 176 minutes). (See Part 1 Tape F2035 and Part 2 Tape F2036). This is session 3 of a 3-part Meat and Poultry Teleconference cosponsored by AFDO and the USDA Food Safety Inspection Service. Upon completion of viewing these videotapes, the viewer will be able to (1) recognize inadequate processes associated with the cooking and cooling of meat and poultry at the retail level; (2) Discuss the hazards associated with foods and the cooking and cooling processes with management at the retail level; (3) Determine the adequacy of control methods to prevent microbiological hazards in cooking and cooling at the retail level, and (4) Understand the principle for determining temperature with various temperature measuring devices. (AFDO/USDA–1999)

F2030 **"Egg Games" Foodservice Egg Handling and Safety**–(18 minute videotape). Develop an effective egg handling and safety program that is right for your operation. Ideal for manager training and foodservice educational programs, this video provides step-by-step information in an entertaining, visually-exciting format. (American Egg Board–1999)

F2020 **Egg Handling & Safety**–(11 minute videotape). Provides basic guidelines for handling fresh eggs which could be useful in training regulatory and industry personnel. (American Egg Board–1997)

F2036 **Emerging Pathogens and Grinding and Cooking Comminuted Beef**–(2 videotapes – 165 minutes.) (See Part 1 Tape F2035 and Part 3 Tape F2037.) This is session 2 of a 3-part Meat and Poultry Teleconference co-sponsored by AFDO and the USDA Food Safety Inspection Service. These videotapes present an action plan for federal, state, local authorities, industry, and trade associations in a foodborne outbreak. (AFDO/USDA–1998)

F2035 **Fabrication and Curing of Meat and Poultry Products**–(2 videotapes – 145 minutes). (See Part 2 Tape F2036 and Part 3 Tape F2037). This is session 1 of a 3-part Meat and Poultry Teleconference cosponsored by AFDO and the USDA Food Safety Inspection Service. Upon viewing, the sanitarian will be able to (1) Identify typical equipment used for meat and poultry fabrication at retail and understand their uses; (2) Define specific terms used in fabrication of meat and poultry products in retail establishments, and (3) Identify specific food safety hazards associated with fabrication and their controls. (AFDO/USDA–1997)

F2039 **Food for Thought–The GMP Quiz Show**–(16 minute videotape). In the grand tradition of television quiz shows, three food industry workers test their knowledge of GMP principles. As the contestants jockey to answer questions, the video provides a thorough and timely review of GMP principles. This video is a cost-effective tool to train new hires or sharpen the knowledge of vet-

eran employees. Topics covered include employee practices, including proper attire, contamination, stock rotation, pest control, conditions for microbial growth and employee traffic patterns. Food safety terms such as HACCP, microbial growth niche, temperature danger zone, FIFO and cross-contamination, are also defined. (Silliker Laboratories–2000)

F2040 **Food Irradiation**–(30 minute videotape). Introduces viewers to food irradiation as a new preservation technique. Illustrates how food irradiation can be used to prevent spoilage by microorganisms, destruction by insects, overripening, and to reduce the need for chemical food additives. The food irradiation process is explained and benefits of the process are highlighted. (Turnelle Productions, Inc.) (Reviewed 1998)

F2045 **Food Microbiological Control**–(6-videotapes – approximate time 12 hours). Designed to provide information and demonstrate the application of basic microbiology, the Good Manufacturing Practices (GMPs), retail Food Code, and sanitation practices when conducting food inspections at the processing and retail levels. Viewers will enhance their ability to identify potential food hazards and evaluate the adequacy of proper control methods for these hazards. (FDA–1998)

F2050 **Food Safe–Food Smart–HACCP & Its Application to the Food Industry**–(2-16 minute videotapes). (1)–Introduces the seven principles of HACCP and their application to the food industry. Viewers will learn about the HACCP system and how it is used in the food industry to provide a safe food supply. (2)–Provides guidance on how to design and implement a HACCP system. It is intended for individuals with the responsibility of setting up a HACCP system. (Alberta Agriculture, Food and Rural Development) (Reviewed 1998)

F2060 **Food Safe–Series I**–(4-10 minute videotapes). (1) "Receiving & Storing Food Safely," details for food-service workers the procedures for performing sight inspections for the general conditions of food, including a discussion of food labeling and government approval stamps. (2) "Food-service Facilities and Equipment," outlines the requirements for the proper cleaning and sanitizing of equipment used in food preparation areas. Describes the type of materials, design, and proper maintenance of this equipment. (3) "Microbiology for Foodservice Workers," provides a basic understanding of the microorganisms which cause food spoilage and foodborne illness. This program describes bacteria, viruses, protozoa, and parasites and the conditions which support their growth. (4) "Food-service Housekeeping and Pest Control," emphasizes cleanliness as the basis for all pest control. Viewers learn the habits and life cycles of flies, cockroaches, rats, and mice. (Perennial Education–1991) (Reviewed 1998)

F2070 **Food Safe–Series II**–(4-10 minute videotapes). Presents case histories of foodborne disease involving (1) *Staphylococcus aureus,* (sauces) (2) *Salmonella,* (eggs) (3) *Campylobacter,* and (4) *Clostridium botulinum.* Each tape demonstrates errors in preparation, holding or serving food; describes the consequences of those actions; reviews the procedures to reveal the cause of the illness; and illustrates the correct practices in a step-by-step demonstration. These are excellent tapes to use in conjunction with hazard analysis critical control point training programs. (Perennial Education–1991) (Reviewed 1998)

F2080 **Food Safe–Series III**–(4-10 minute videotapes). More case histories of foodborne disease. This set includes (1) Hepatitis "A", (2) *Staphylococcus aureus* (meats), (3) *Bacillus cereus*, and (4) *Salmonella* (meat). Viewers will learn typical errors in the preparation, holding and serving of food. Also included are examples of correct procedures which will reduce the risk of food contamination. (Perennial Education–1991) (Reviewed 1998)

F2133 **Food Safety First**–(50 minute videotape). This food safety training video presents causes of foodborne illness in foodservice and ways to prevent foodborne illness. Individual segments include personal hygiene and handwashing, cleaning and sanitizing, preventing cross contamination and avoiding time and temperature abuse. Foodhandling principles are presented through scenarios in a restaurant kitchen. (Glo-Germ 1998). Available in Spanish.

F2090 **Food Safety: An Educational Video for Institutional Food-Service Workers**–(10 minute videotape). Provides a general discussion on food safety principles with special emphasis on pathogen reductions in an institutional setting from child care centers to nursing homes. (US Department of Health & Human Services–1997)

Food Safety for Foodservice Series I–An employee video series containing quick, 10-minute videos that teach food service employees how to prevent foodborne illness. This four video series examines sources of foodborne illness, plus explores prevention through awareness and recommend-ations for best practices for food safety. It also looks at how food safety affects the food service employee's job. (J.J. Keller & Associates–2000)

F2100 **Tape 1–Food Safety for Food Service: Cross Contamination** – (10 minute videotape). Provides the basic information needed to ensure integrity and safety in foodservice operations. Explains proper practices and procedures to prevent, detect and eliminate cross contamination.

F2101 **Tape 2–Food Safety for Food Service: HACCP** – (10 minute videotape). This video takes the mystery out of HACCP for your employees, and explains the importance of HACCP procedures in

their work. Employees will come away feeling confident, knowing how to make HACCP work. The seven steps of HACCP and how HACCP is used in foodservice are some of the topics discussed.

F2102 **Tape 3–Food Safety for Food Service: Personal Hygiene**–(10 minute videotape). This video establishes clear, understandable ground rules for good personal hygiene in the foodservice workplace and explains why personal hygiene is so important. Topics include: personal cleanliness; proper protective equipment; correct hand washing procedures; when to wash hands, hygiene with respect to cross contamination and prohibited practices and habits.

F2103 **Tape 4–Food Safety for Food Service: Time and Temperature Controls**–(10 minute videotape). This video examines storage and handling of raw and cooked ingredients, and explains how to ensure their safety. Employees learn how to spot potential problems and what to do when they find them. Topics include: correct thermometer use, cooling, thawing and heating procedures, food storage procedures, holding temperature requirements, and handling leftovers.

Food Safety for Foodservice Series II–An employee video series containing quick, 10-minute videos that boost safety awareness for food service employees and teach them how to avoid foodborne illness. (J. J. Keller & Associates, Neenah, WI–2002)

F2104 **Tape 1–Basic Microbiology and Foodborne Illness**–(10 minute videotape). Covers four common microorganisms in food, how they get into food, and simple ways to prevent contamination. Stresses the importance of keeping food at the right temperature, having proper personal hygiene, and cleaning and sanitizing work surfaces.

F2105 **Tape 2–Handling Knives, Cuts and Burns**–(10 minute videotape). Explains why sharp knives are safer than dull ones, provides tips for selecting a good knife, and gives techniques for cutting food safely. Also explains first aid for cuts and burns and the most common causes of burns.

F2106 **Tape 3–Working Safely to Prevent Injury**–(10 minute videotape). Discusses common lifting hazards and how back injuries can happen. Gives proper lifting and carrying techniques to prevent soreness and injury. Also covers how to prevent slips, trips, and falls.

F2107 **Tape 4–Sanitation**–(10 minute videotape). Provides tips for good personal hygiene habits, including the proper way to wash your hands, dress, and prepare for work. Also covers cleaning and sanitizing equipment; storing chemicals and cleaning supplies; and controlling pests that can contaminate work areas and food.

F2120 **Food Safety: For Goodness Sake, Keep Food Safe**–(15 minute videotape). Teaches foodhandlers the fundamentals of safe food handling. The tape features the key elements of cleanliness and sanitation, including: good personal hygiene, maintaining proper food product temperature, preventing time abuse, and potential sources of food contamination. (Iowa State University Extension–1990) (Reviewed 1998)

F2110 **Food Safety is No Mystery**–(34 minute videotape). This is an excellent training visual for food-service workers. It shows the proper ways to prepare, handle, serve and store food in actual restaurant, school and hospital situations. A policeman sick from food poisoning, a health department sanitarian, and a food-service worker with all the bad habits are featured. The latest recommendations on personal hygiene, temperatures, cross-contamination, and storage of foods are included. (USDA–1987). Also available in Spanish. – (Reviewed 1998)

F2130 **Food Safety: You Make the Difference**–(28 minute videotape). Through five food workers from differing backgrounds, this engaging and inspirational documentary style video illustrates the four basic food safety concepts: handwashing, preventing cross-contamination, moving foods quickly through the danger zone, and hot/cold holding (Seattle-King County Health Department–1995)

Food Safety Zone Video Series–A one-of-a-kind series that helps get your employees to take food safety issues seriously! These short, to-the-point videos can help make your employees aware of various food hazards, and how they can help promote food safety. The 4 topics are: Basic Microbiology, Cross Contamination, Personal Hygiene, and Sanitation. (J.J. Keller & Associates – 1999). (Also available in Spanish.)

F2125 **Tape 1–Food Safety Zone: Basic Microbiology**–(10 minute videotape). In this video, food service personnel will gain a deeper understanding of food safety issues and what they can do to prevent recalls and contamination. It describes the different types of bacteria that can be harmful to food, and tells how to minimize bacterial growth through time and temperature controls, personal hygiene practices, and sanitation.

F2126 **Tape 2–Food Safety Zone: Cross Contamination**–(10 minute videotape). Quickly teach your employees how they can help prevent cross contamination. Employees are educated on why contaminants can be extremely

dangerous, cause serious injury, and even death, to consumers of their food products. This fast-paced video will give your employees a deeper understanding of the different types of cross contamination, how to prevent it, and how to detect it through visual inspections and equipment. The emphasis is that prevention is the key to eliminating cross contamination.

F2127 **Tape 3–Food Safety Zone: Personal Hygiene**–(10 minute videotape). After watching this video, your employees will understand why their personal hygiene is critical to the success of your business. This video teaches employees about four basic good personal hygiene practices: keeping themselves clean, wearing clean clothes, following specific hand washing procedures, and complying with all related work practices. Personnel are also taught that personal hygiene practices are designed to prevent them from accidentally introducing bacteria to food products, and are so important that there are federal laws that all food handlers must obey.

F2128 **Tape 4–Food Safety Zone: Sanitation**–(10 minute videotape). Don't just tell your employees why sanitation is important, show them! This training video teaches employees about the sanitation procedures that cover all practices to keep workplaces clean, and food produced free of contaminants and harmful bacteria. Four areas covered include personal hygiene, equipment and work areas, use and storage of cleaning chemicals and equipment, and pest control.

F2135 **Get with a Safe Food Attitude**–(40 minute videotape). Consisting of nine short segments which can be viewed individually or as a group, this video presents safe food handling for moms-to-be. Any illness a pregnant woman contracts can affect her unborn child whose immune system is too immature to fight back. The video follows four pregnant women as they learn about food safety and preventing foodborne illness. (US Department of Agriculture–1999)

F2136 **GLP Basics: Safety in the Food Micro Lab**–(16 minute videotape). This video is designed to teach laboratory technicians basic safety fundamentals and how to protect themselves from inherent workplace dangers. Special sections on general laboratory rules, personal protective equipment, microbiological, chemical, and physical hazards, autoclave safety, and spill containment are featured. (Silliker Laboratories Group, Inc., Homewood, IL–2001)

F2137 **GMP Basics: Avoiding Microbial Cross-Contamination**–(15 minute videotape). This video takes a closer look at how harmful microorganisms, such as *Listeria*, can be transferred to finished products. Employees see numerous examples of how microbial cross-contamination can occur from improper traffic patterns, poor personal hygiene, soiled clothing, unsanitized tools and equipment. Employees need specific knowledge and practical training to avoid microbial cross-contamination in plants. This video aids in that training. (Silliker Laboratories–2000)

F2140 **GMP Basics – Employee Hygiene Practices**–(20 minute videotape). Through real-life examples and dramatization, this video demonstrates good manufacturing practices that relate to employee hygiene, particularly hand washing. This video includes a unique test section to help assess participants' understanding of common GMP violations. (Silliker Laboratories–1997)

F2143 **GMP Basics: Guidelines for Maintenance Personnel**–(21 minute videotape). Developed specifically for maintenance personnel working in a food processing environment, this video depicts a plant-wide training initiative following a product recall announcement. Maintenance personnel will learn how GMPs relate to their daily activities and how important their roles are in the production of safe food products. (Silliker Laboratories–1999)

F2148 **GMP–GSP Employee**–(38 minute videotape). This video was developed to teach food plant employees the importance of "Good Manufacturing Practices" and "Good Sanitation Practices." Law dictates that food must be clean and safe to eat. This video emphasizes the significance of each employee's role in protecting food against contamination. Tips on personal cleanliness and hygiene are also presented. (L.J. Bianco & Associates)

F2150 **GMP: Personal Hygiene & Practices in Food Manufacturing**–(14 minute videotape). This video focuses on the personal hygiene of food-manufacturing workers, and explores how poor hygiene habits can be responsible for the contamination of food in the manufacturing process. This is an instructional tool for new food-manufacturing line employees and supervisors. It was produced with "real" people in actual plant situations, with only one line of text included in the videotape. (Penn State–1993)–(Available in Spanish and Vietnamese)

F2147 **GMP Basics: Process Control Practices**–(16 minute videotape). In actual food processing environments, an on-camera host takes employees through a typical food plant as they learn the importance of monitoring and controlling key points in the manufacturing process. Beginning with receiving and storing, through production, and ending with packaging and distribution, control measures are introduced, demonstrated, and reviewed. Employees

will see how their everyday activities in the plant have an impact on product safety. (Silliker Laboratories–1999)

F2160 **GMP: Sources & Control of Contamination during Processing**–(20 minute videotape). This program, designed as an instructional tool for new employees and for refresher training for current or reassigned workers, focuses on the sources and control of contamination in the food-manufacturing process. It was produced in actual food plant situations. A concise description of microbial contamination and growth and cross-contamination, a demonstration of food storage, and a review of aerosol contaminants are also included. (Penn State–1995)

F2180 **HACCP: Safe Food Handling Techniques**–(22 minute videotape). The video highlights the primary causes of food poisoning and emphasizes the importance of self-inspection. An explanation of potentially hazardous foods, cross-contamination, and temperature control is provided. The main focus is a detailed description of how to implement a Hazard Analysis Critical Control Point (HACCP) program in a food-service operation. A leader's guide is provided as an adjunct to the tape. (The Canadian Restaurant & Foodservices Association–1990) (Reviewed 1998)

F2169 **HACCP: Training for Employees — USDA Awareness**–(15 minute videotape). This video is a detailed training outline provided for the employee program. Included in the video is a synopsis of general federal regulations; HACCP plan development; incorporation of HACCP's seven principles; HACCP plan checklist, and an HACCP employee training program. (J.J. Keller & Associates—1999)

F2172 **HACCP: Training for Managers**–(17 minute videotape). Through industry-specific examples and case studies, this video addresses the seven HACCP steps, identifying critical control points, recordkeeping and documentation, auditing, and monitoring. It also explains how HACCP relates to other programs such as Good Manufacturing Practices and plant sanitation. (J.J. Keller & Associates, Inc.–2000)

F2170 **The Heart of HACCP**–(22 minute videotape). A training video designed to give plant personnel a clear understanding of the seven HACCP principles and practical guidance on how to apply these principles to their own work environment. This video emphasizes the principles of primary concern to plant personnel such as critical limits, monitoring systems, and corrective actions that are vital to the success of a HACCP plan. (Silliker Laboratories Group–1994)

F2171 **HACCP: The Way to Food Safety**–(53 minute videotape). The video highlights the primary causes of food poisoning and stresses the importance of self-inspection. Potentially hazardous foods, cross-contamination and temperature control are explained. The video is designed to give a clear understanding of the seven HACCP principles and practical guidance on how to apply these principles to a work environment. Critical limits, monitoring systems and corrective action plans are emphasized. The video also provides an overview of foodborne pathogens, covering terminology, the impact of pathogens, and what employees must do to avoid problems. Also described are the sources, causes and dangers of contamination in the food industry. (Southern Illinois University–1997)

F2173 **Inside HACCP: Principles, Practices & Results**–(15 minute videotape). This video is designed to help you build a more knowledgeable workforce and meet safety standards through a comprehensive overview of HACCP principles. Employees are provided with details of prerequisite programs and a clear overview of the seven HACCP principles. "Inside HACCP" provides short succinct explanations of how HACCP works and places special emphasis on the four principles – monitoring, verification, corrective action, and recordkeeping – in which employees actively participate. (Silliker Laboratories Group, Inc., Homewood, IL–2001)

F2175 **Inspecting For Food Safety–Kentucky's Food Code**–(100 minute videotape). Kentucky's Food Code is patterned after the Federal Food Code. The concepts, definitions, procedures, and regulatory standards included in the code are based on the most current information about how to prevent foodborne diseases. This video is designed to prepare food safety inspectors to effectively use the new food code in the performance of their duties. (Department of Public Health Commonwealth of Kentucky–1997) (Reviewed 1999)

F2190 **Is What You Order What You Get? Seafood Integrity**–(18 minute videotape). Teaches seafood department employees about seafood safety and how they can help insure the integrity of seafood sold by retail food markets. Key points of interest are cross-contamination control, methods and criteria for receiving seafood and determining product quality, and knowing how to identify fish and seafood when unapproved substitutions have been made. (The Food Marketing Institute) (Reviewed 1998)

F2210 **Northern Delight–From Canada to the World**–(13 minute videotape). A promotional video that explores the wide variety of foods and beverages produced by the Canadian food industry. General in nature, this tape presents an overview of Canada's food industry and its contribution to the world's food supply. (Ternelle Production, Ltd.) (Reviewed 1998)

F2240 **On the Front Line**–(18 minute videotape). A training video pertaining to sanitation fundamentals for vending service personnel. Standard cleaning and serving procedures for cold food, hot beverage and cup drink vending

machines are presented. The video emphasizes specific cleaning and serving practices which are important to food and beverage vending operations. (National Automatic Merchandising Association–1993) (Reviewed 1998)

F2250 **On the Line**–(30 minute videotape). This was developed by the Food Processors Institute for training food processing plant employees. It creates an awareness of quality control and regulations. Emphasis is on personal hygiene, equipment cleanliness and good housekeeping in a food plant. It is recommended for showing to both new and experienced workers. (Available in Spanish) The Food Processors Institute. 1993. (Reviewed 1998)

F2270 **Pest Control in Seafood Processing Plants**–(26 minute videotape). Videotape which covers procedures to control flies, roaches, mice, rats and other common pests associated with food processing operations. The tape will familiarize plant personnel with the basic characteristics of these pests and the potential hazards associated with their presence in food operations. (Reviewed 1998)

F2280 **Principles of Warehouse Sanitation**–(33 minute videotape). This videotape gives a clear, concise and complete illustration of the principles set down in the Food, Drug and Cosmetic Act and in the Good Manufacturing Practices, as well as supporting legislation by individual states. (American Institute of Baking–1993)

F2290 **Product Safety & Shelf Life**–(40 minute videotape). Developed by Borden Inc., this videotape was done in three sections with opportunity for review. Emphasis is on providing consumers with good products. One section covers off-flavors, another product problems caused by plant conditions, and a third the need to keep products cold and fresh. Procedures to assure this are outlined, as shown in a plant. Well done and directed to plant workers and supervisors. (Borden–1987) – (Reviewed 1997)

F2220 **Proper Handling of Peracidic Acid**–(15 minute videotape). Introduces paracidic acid as a chemical sanitizer and features the various precautions needed to use the product safely in the food industry.

F2230 **Purely Coincidental**–(20 minute videotape). A parody that shows how foodborne illness can adversely affect the lives of families that are involved. The movie compares improper handling of dog food in a manufacturing plant that causes the death of a family pet with improper handling of human food in a manufacturing plant that causes a child to become ill. Both cases illustrate how handling errors in food production can produce devastating outcomes. (The Quaker Oats Company–1993.) (Reviewed 1998)

F2310 **Safe Food: You Can Make a Difference**–(25 minute videotape). A training video for food-service workers which covers the fundamentals of food safety. An explanation of proper food temperature, food storage, cross-contamination control, cleaning and sanitizing, and handwashing as methods of foodborne illness control is provided. The video provides an orientation to food safety for professional foodhandlers. (Tacoma–Pierce County Health Department–1990). (Reviewed 1998)

F2320 **Safe Handwashing**–(15 minute videotape). Twenty-five percent of all foodborne illnesses are traced to improper handwashing. The problem is not just that handwashing is not done, the problem is that it's not done properly. This training video demonstrates the "double wash" technique developed by Dr. O. Peter Snyder of the Hospitality Institute for Technology and Management. Dr. Snyder demonstrates the procedure while reinforcing the microbiological reasons for keeping hands clean. (Hospitality Institute for Technology and Management–1991) (Reviewed 1998)

F2325 **Safe Practices for Sausage Production**–(3 hour videotape). This videotape is based on a series of educational broadcasts on meat and poultry inspections at retail food establishments produced by the Association of Food and Drug Officials (AFDO) and USDA's Food Safety and Inspection Service (FSIS), along with FDA's Center for Food Safety and Applied Nutrition. The purpose of the broadcast was to provide training to state, local, and tribal sanitarians on processes and procedures that are being utilized by retail stores and restaurants, especially those that were usually seen in USDA-inspected facilities. The program will cover the main production steps of sausage products, such as the processes of grinding, stuffing, and smoking, and typical equipment used will be depicted. Characteristics of different types of sausage (fresh, cooked and smoked, and dry/semi-dry) will be explained. Pathogens of concern and outbreaks associated with sausage will be discussed. The written manual for the program is available at www.fsis.usda.gov/ofo/hrds/STATE/RETAIL/manual.htm. (1999)

F2460 **Safer Processing of Sprouts**–(1 hour and 22 minute videotape). Sprouts are enjoyed by many consumers for their taste and nutritional value. However, recent outbreaks of illnesses associated with sprouts have demonstrated a potentially serious human health risk posed by this food. FDA and other public health officials are working with industry to identify and implement production practices that will assure that seed and sprouted seed are produced under safe conditions. This training video covers safe processing practices of sprouts including growing, harvesting, milling, transportation, storage, seed treatment, cleaning and sanitizing, sampling and microbiological testing. (CA Dept. of Health Services, Food and Drug Branch; U.S. Food and Drug Administration, and the Centers for Disease Control and Prevention – 2000)

F2330 **Sanitation for Seafood Processing Personnel**–(20 minute videotape). A training video suited for professional foodhandlers working in any type of food manufacturing plant. The film highlights Good Manufacturing Practices and their role in assuring food safety. The professional foodhandler is introduced to a variety of sanitation topics including: (1) foodhandlers as a source of food contamination, (2) personal hygiene as a means of preventing food contamination, (3) approved food storage techniques including safe storage temperatures, (4) sources of cross-contamination, (5) contamination of food by insects and rodents, (6) garbage handling and pest control, and (7) design and location of equipment and physical facilities to facilitate cleaning. (Reviewed 1998)

F2340 **Sanitizing for Safety**–(17 minute videotape). Provides an introduction to basic food safety for professional foodhandlers. A training pamphlet and quiz accompany the tape. Although produced by a chemical supplier, the tape contains minimal commercialism and may be a valuable tool for training new employees in the food industry. (Clorox–1990) (Reviewed 1998)

F2350 **ServSafe® Steps to Food Safety**–The ServSafe food safety series consists of six videos that illustrate and reinforce important food safety practices in an informative and entertaining manner. The videos provide realistic scenarios in multiple industry segments. English and Spanish are provided on each tape. (National Restaurant Association Education Foundation –2000)

Step One: Starting Out with Food Safety–(12 minute videotape). Defines what foodborne illness is and how it occurs; how foods become unsafe; and what safety practices to follow during the flow of food.

Step Two: Ensuring Proper Personal Hygiene–(10 minute videotape). Introduces employees to ways they might contaminate food; personal cleanliness practices that help protect food; and the procedure for thorough handwashing.

Step Three: Purchasing, Receiving and Storage–(12 minute videotape). Explains how to choose a supplier; calibrate and use a thermometer properly; accept or reject a delivery; and store food safely.

Step Four: Preparing, Cooking, and Serving–(11 minute videotape). Identifies proper practices for thawing, cooking, holding, serving, cooling and reheating food.

Step Five: Cleaning and Sanitizing–(11 minute videotape). Describes the difference between cleaning and sanitizing; manual and machine warewashing; how sanitizers work; how to store clean items and cleaning supplies; and how to setup a cleaning program.

Step Six: Take the Food Safety Challenge: Good Practices, Bad Practices — You Make the Call!–(35 minute videotape). Challenges viewers to identify good and bad practices presented in five short scenarios from different industry segments.

F2400 **The Amazing World of Microorganisms** — (12 minute videotape). This video will provide your employees with an overview of how microorganisms affect their everyday lives and the foods they produce. The video explores how microscopic creatures are crucial in producing foods, fighting disease, and protecting the environment. In addition, certain microorganisms are responsible for food spoilage, illness, and even death. Equipped with this knowledge, your employees will be better able to protect your brand. (Silliker Laboratories Group, Inc., Homewood, IL–2001)

F2430 **Smart Sanitation: Principles & Practices for Effectively Cleaning Your Food Plant**–(20 minute videotape). A practical training tool for new sanitation employees or as a refresher for veterans. Employees will understand the food safety impact of their day-to-day cleaning and sanitation activities and recognize the importance of their role in your company's food safety program. (Silliker Laboratories Group–1996)

F2370 **Supermarket Sanitation Program–"Cleaning & Sanitizing"**–(13 minute videotape). Contains a full range of cleaning and sanitizing information with minimal emphasis on product. Designed as a basic training program for supermarket managers and employees. (1989) (Reviewed 1998)

F2380 **Supermarket Sanitation Program–"Food Safety"**–(11 minute videotape). Contains a full range of basic sanitation information with minimal emphasis on product. Filmed in a supermarket, the video is designed as a basic program for manager training and a program to be used by managers to train employees. (1989) (Reviewed 1998)

F2390 **Take Aim at Sanitation**–(8 minute videotape). This video features tips on food safety and proper disposal of single service items. Also presented is an emphasis on food contact surfaces as well as the manufacture, storage and proper handling of these items. (Foodservice and Packaging Institute, Inc.–1995). (Available in Spanish)

F2410 **Wide World of Food-Service Brushes**–(18 minute videotape). Discusses the importance of cleaning and sanitizing as a means to prevent and control foodborne illness. Special emphasis is given to proper cleaning and sanitizing procedures and the importance of having properly designed and constructed equipment (brushes) for food preparation and equipment cleaning operations. (1989) (Reviewed 1998)

F2420 **Your Health in Our Hands–Our Health in Yours**–(8 minute videotape). For professional foodhandlers, the tape covers the do's and don'ts of foodhandling as they relate to personal hygiene, temperature control, safe storage and proper sanitation. (Jupiter Video Production–1993). (Reviewed 1998)

OTHER

M4010 **Diet, Nutrition & Cancer**–(20 minute videotape). Investigates the relationship between a person's diet and the risk of developing cancer. The film describes the cancer development process and identifies various types of food believed to promote and/or inhibit cancer. The film also provides recommended dietary guidelines to prevent or greatly reduce the risk of certain types of cancer.

M4020 **Eating Defensively: Food Safety Advice for Persons with AIDS**–(15 minute videotape). While HIV infection and AIDS are not acquired by eating foods or drinking liquids, persons infected with the AIDS virus need to be concerned about what they eat. Foods can transmit bacteria and viruses capable of causing life-threatening illness to persons infected with AIDS. This video provides information for persons with AIDS on what foods to avoid and how to better handle and prepare foods. (FDA/CDC–1989)

M4030 **Ice: The Forgotten Food**–(14 minute videotape). This training video describes how ice is made and where the critical control points are in its manufacture, both in ice plants and in on-premises locations (convenience stores, etc.); it documents the potential for illness from contaminated ice and calls on government to enforce good manufacturing practices, especially in on-premises operations where sanitation deficiencies are common. (Packaged Ice Association–1993)

M4050 **Personal Hygiene & Sanitation for Food Processing Employees**–(15 minute videotape). Illustrates and describes the importance of good personal hygiene and sanitary practices for people working in a food processing plant. (Iowa State–1993)

M4060 **Psychiatric Aspects of Product Tampering**–(25 minute videotape). This was presented by Emanuel Tanay, M.D. from Detroit, at the fall 1986 conference of CSAFDA. He reviewed a few cases and then indicated that abnormal behavior is like a contagious disease. Media stories lead to up to 1,000 similar alleged cases, nearly all of which are false. Tamper-proof packaging and recalls are essential. Tampering and poisoning are characterized by variable motivation, fraud and greed. Law enforcement agencies have the final responsibilities. Tamper proof containers are not the ultimate answer. (1987)

M4070 **Tampering: The Issue Examined**–(37 minute videotape). Developed by Culbro Machine Systems, this videotape is well done. It is directed to food processors and not regulatory sanitarians or consumers. A number of industry and regulatory agency management explain why food and drug containers should be made tamper evident. (Culbro–1987)

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- ❒ D1040 Ether Extraction Method for Determination of Raw Milk
- ❒ D1050 The Farm Bulk Milk Hauler (slides)
- ❒ D1060 Frozen Dairy Products
- ❒ D1070 The Gerber Butterfat Test
- ❒ D1080 High-Temperature, Short-Time Pasteurizer
- ❒ D1090 Managing Milking Quality
- ❒ D1100 Mastitis Prevention and Control
- ❒ D1110 Milk Plant Sanitation: Chemical Solution
- ❒ D1120 Milk Processing Plant Inspection Procedures
- ❒ D1130 Pasteurizer - Design and Regulation
- ❒ D1140 Pasteurizer - Operation
- ❒ D1150 Processing Fluid Milk (slides)

ENVIRONMENTAL

- ❒ E3010 The ABCs of Clean - A Handwashing & Cleanliness Program for Early Childhood Programs
- ❒ E3020 Acceptable Risks?
- ❒ E3030 Air Pollution: Indoor
- ❒ E3040 Asbestos Awareness
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- ❒ E3060 EPA Test Methods for Freshwater Effluent Toxicity Tests (Using Ceriodaphnia)
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- ❒ E3140 Putting Aside Pesticides
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- ❒ E3160 RCRA - Hazardous Waste
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- ❒ E3250 Waste Not: Reducing Hazardous Waste

FOOD

- ❒ F2260 100 Degrees of Doom...The Time & Temperature Caper
- ❒ F2450 A Guide to Making Safe Smoked Fish
- ❒ F2005 A Lot on the Line
- ❒ F2007 The Amazing World of Microorganisms
- ❒ F2140 Cleaning & Sanitizing in Vegetable Processing Plants: Do It Well. Do It Safely!
- ❒ F2010 Close Encounters of the Bird Kind
- ❒ F2015 Controlling *Listeria*: A Team Approach
- ❒ F2037 Cooking and Cooling of Meat and Poultry Products (2 Videos)
- ❒ F2030 "Egg Games" Foodservice Egg Handling and Safety
- ❒ F2020 Egg Handling & Safety
- ❒ F2036 Emerging Pathogens and Grinding and Cooking Comminuted Beef (2 Videos)
- ❒ F2035 Fabrication and Curing of Meat and Poultry Products (2 Videos)
- ❒ F2039 Food for Thought – The GMP Quiz Show
- ❒ F2040 Food Irradiation
- ❒ F2045 Food Microbiological Control (6 Videos)
- ❒ F2050 Food Safe - Food Smart - HACCP & Its Application to the Food Industry (Part 1&2)
- ❒ F2060 Food Safe - Series I (4 Videos)
- ❒ F2070 Food Safe - Series II (4 Videos)
- ❒ F2080 Food Safe - Series III (4 Videos)
- ❒ F2133 Food Safety First
- ❒ F2090 Food Safety: An Educational Video for Institutional Food-Service Workers
- ❒ F2100 Tape 1-Cross Contamination
- ❒ F2101 Tape 2- HACCP
- ❒ F2102 Tape 3-Personal Hygiene
- ❒ F2103 Tape 4-Time and Temperature Controls
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- ❒ F2150 GMP: Personal Hygiene and Practices in Food Manufacturing
- ❒ F2147 GMP Basics: Process Control Practices
- ❒ F2160 GMP: Sources & Control of Contamination during Processing
- ❒ F2180 HACCP: Safe Food Handling Techniques
- ❒ F2169 HACCP:Training for Employees–USDA Awareness
- ❒ F2172 HACCP:Training for Managers
- ❒ F2170 The Heart of HACCP
- ❒ F2171 HACCP: The Way to Food Safety
- ❒ F2173 Inside HACCP: Principles, Practices & Results
- ❒ F2175 Inspecting For Food Safety - Kentucky's Food Code
- ❒ F2190 Is What You Order What You Get? Seafood Integrity
- ❒ F2210 Northern Delight - From Canada to the World
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- ❒ M4030 Ice: The Forgotten Food
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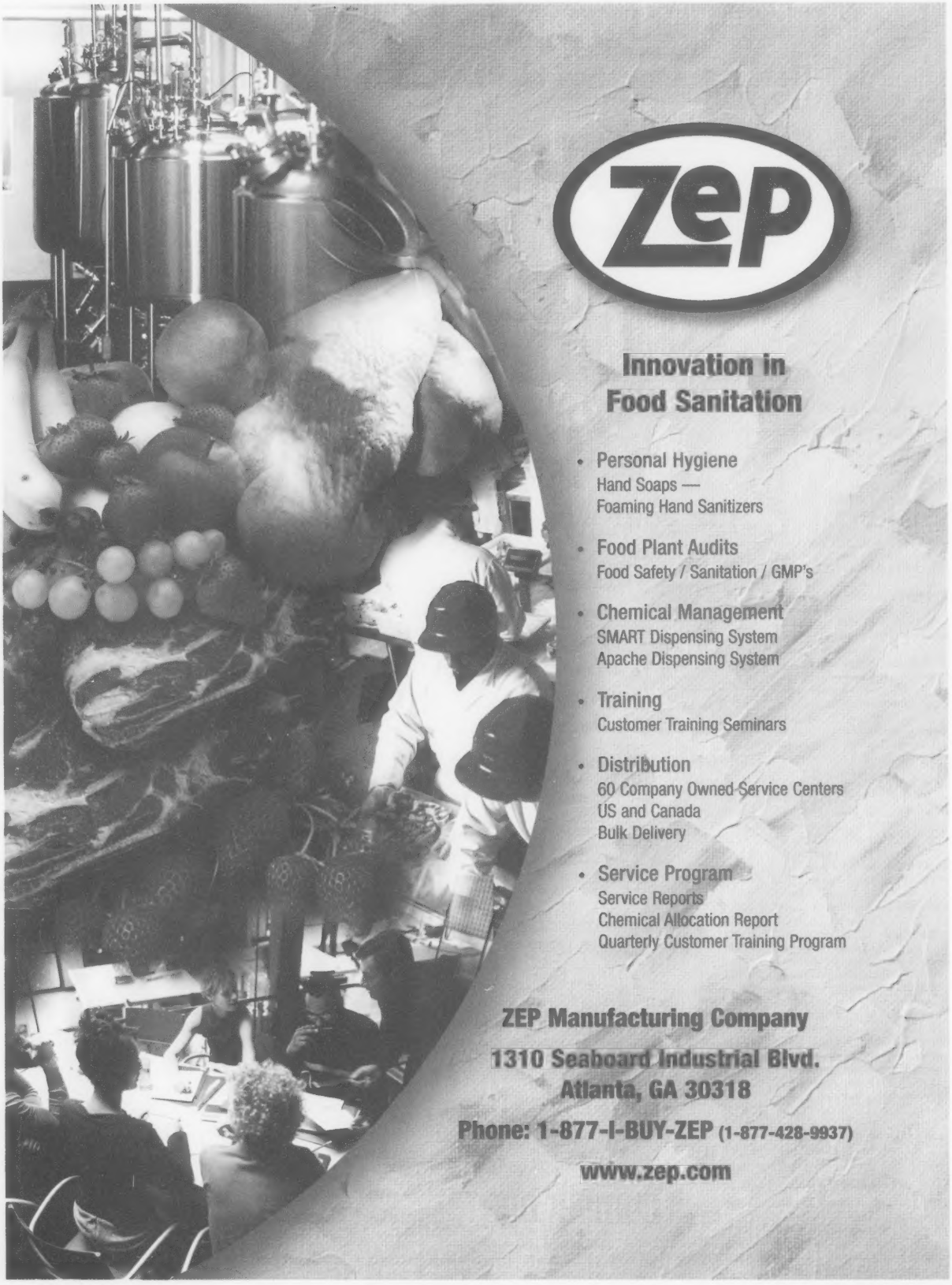

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To All IAFP Members:

Today I want to encourage your involvement in the Committees and Professional Development Groups (PDGs) of the International Association for Food Protection. Each of these groups serves a vital function in providing guidance, direction and information for the Association and our fellow Members. Your experience and expertise is welcome and needed! You may volunteer to serve multiple Committees or PDGs at one time, so don't be shy. If you have participated on our Committees or PDGs in the past, I commend you for your service and encourage you to continue.

Committees and PDGs meet during the Annual Meeting and may meet throughout the year via conference call or E-mail. Even if you are not able to attend IAFP 2002 in San Diego, your involvement is still possible. Please review the Committees and PDGs listed on the following pages to find a group that is of special interest to you. If you have questions, call or E-mail the Chairperson listed to learn more about the function of the group. Then, if it sounds interesting to you, volunteer your time and efforts to serve the Association in this way. Through active participation, you can establish a network of contacts and help better the profession while strengthening your leadership skills.

Your input and ideas are welcome at all times. So accept the challenge today; call one of the Chairpersons to let him or her know of your interest in sharing your knowledge and expertise with other IAFP Members.

I look forward to seeing your name on our next Committee listing!

Sincerely,

Paul A. Hall

Paul A. Hall
Vice President, IAFP

"Our mission is to provide food safety professionals worldwide with a forum to exchange information on protecting the food supply."
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Dairy, Food and Environmental Sanitation Management Committee

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E-mail: cmbruhn@ucdavis.edu

Journal of Food Protection Management Committee

Donald E. Conner
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E-mail: dconner@acesag.auburn.edu

Program Committee

Frank Yiannas
Phone: 407.397.6060 Fax: 407.397.6630
E-mail: frank.yiannas@disney.com

SPECIAL COMMITTEES

3-A Committee on Sanitary Procedures

Dan Erickson
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E-mail: daniel.erickson@state.mn.us

Audiovisual Library Committee

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Awards Committee

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Black Pearl Selection Committee

Jenny Scott
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E-mail: jscott@nfpa-food.org

Committee on Communicable Diseases Affecting Man

Ewen Todd
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E-mail: toddewen@cvm.msu.edu

Constitution and Bylaws Committee

Michael H. Brodsky
Phone: 905.889.8092 Fax: 905.889.2276
E-mail: mhbrodsky@rogers.com

Developing Scientist Awards Committee

LeeAnne Jackson
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E-mail: LeeAnne.Jackson@cfsan.fda.gov

Fellows Selection Committee

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PROFESSIONAL DEVELOPMENT GROUPS

Applied Laboratory Methods PDG

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E-mail: robertbrooks3@compuserve.com

Dairy Quality & Safety PDG

Don M. Breiner
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E-mail: dbrei@landolakes.com

Food Safety Network PDG

Gisele LaPointe
Phone: 418.656.2131 x5984 Fax: 418.656.3353
E-mail: gisele.lapointe@aln.ulaval.ca

Food Sanitation PDG

Veneranda Gapud
Phone: 404.459.4491 Fax: 404.459.4535
E-mail: vgapud@afce.com

Fruit and Vegetable Safety and Quality PDG

Donna M. Garren
Phone: 703.836.3410 x103 Fax: 703.836.2049
E-mail: dgarren@uffva.org

Meat and Poultry Safety and Quality PDG

Ruff Lowman
Phone: 613.228.6698 x4946 Fax: 613.228.6663
E-mail: rlowman@inspection.gc.ca

Microbial Risk Analysis PDG

Donald W. Schaffner
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E-mail: schaffner@aesop.rutgers.edu

Outreach Education PDG

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Retail Food Safety and Quality PDG

Frank Yiannas
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E-mail: frank.yiannas@disney.com

Seafood Safety and Quality PDG

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Student PDG

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Viral and Parasitic Foodborne Disease PDG

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Water Safety and Quality PDG

Susan McKnight
Phone: 847.291.7674 x207 Fax: 847.291.7679
E-mail: smcknight@qualityflow.com

TASK FORCES

HACCP Task Force

Peter J. Slade
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AFFILIATE COUNCIL

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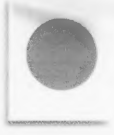

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Director
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Atlanta, Georgia

Food Safety in the Time of Anthrax

Sunday, June 30, 2002

Opening Session — 7:00 p.m.

Mitchell L. Cohen, M.D.

Dr. Mitchell L. Cohen received his undergraduate and medical degrees from Duke University. His postgraduate training was in internal medicine at the University of Texas Southwestern Medical School, and his Infectious Disease Fellowship was completed at the University of Washington in Seattle. Since 1976, he has held positions in the Enteric Diseases Branch; Hospital Infections Program; and Office of the Director in the Division of Bacterial and Mycotic Diseases. His research interests include the epidemiology of antimicrobial resistance, foodborne diseases, and the application of molecular biology techniques to answer epidemiologic questions. He has been editor and reviewer for a number of scientific journals. He is a Fellow in the American College of Physicians and the Infectious Diseases Society of America. Dr. Cohen has been a member of several advisory committees including the Recombinant DNA Advisory Committee, National Institutes of Health, and the National Advisory Committee on Microbiological Criteria for Foods.

Preliminary Program

Sunday, June 30, 2002 – 7:00 p.m.

Opening Session — Ivan Parkin Lecture: "Food Safety in the Time of Anthrax"

Monday, July 1, 2002

Morning — 8:30 a.m. – 12:00 p.m.

Symposium Topics

- Antibiotic Resistance in Humans and Feed Animals
- Viruses in Food
- Development in Intervention Technologies to Enhance Produce Safety
- Safety of Latin-Style High Moisture Fresh Cheese

Technical Session

- Meat and Poultry Microbiology

Poster Session (10:00 a.m. – 1:00 p.m.)

- Microbiological Methods and Antimicrobials

Afternoon — 1:30 p.m. – 5:00 p.m.

Symposium Topics

- Enhancing Agricultural Security
- Minimizing the Risk of *Salmonella* Enteritidis in Shell Eggs
- Microbiological Food Safety at Retail
- Extended Shelf Life Meat Products – Issues and Interventions

Technical Session

- Microbiological Methods

Poster Session (3:00 p.m. – 6:00 p.m.)

- General Food Microbiology

Tuesday, July 2, 2002

Morning — 8:30 a.m. – 12:00 p.m.

Symposium Topics

- Cooperating to Improve Foodborne Outbreak Investigations
- Integrated Approaches for the Study and Control of Foodborne Pathogens in Meat and Poultry
- *Listeria* Research Update
- Current Issues in Seafood Safety

Technical Session

- GMOs and Produce

Poster Session (10:00 a.m. – 1:00 p.m.)

- Produce, Meat, and Seafood Microbiology

Afternoon — 1:30 p.m. – 3:30 p.m.

Symposium Topics

- Controlling *Clostridium perfringens* Hazards during Cooling
- Innovations in Retail Food Safety Management Systems and Technology
- Alternatives in Dairy Waste Management: Create New Products or Generate Power!

Technical Session

- Public Health and Outbreaks

Lecture Topics

- ICMSF Lecture on Current Topics (1:30 p.m. – 2:30 p.m.)
- WHO/FAO Lecture on Current Risk Assessment Work (2:30 p.m. – 3:30 p.m.)

Business Meeting — 4:00 p.m. – 5:00 p.m.

Wednesday, July 3, 2002

Morning — 8:30 a.m. – 12:00 p.m.

Symposium Topics

- Chronic Wasting Disease and Other Transmissible Spongiform Encephalopathies
- Applications of DNA Chip Technology in the Food Safety Area
- Sanitary Design of Plants and Equipment
- Risk Assessment of Food Workers Hygiene Practices and Intervention Strategies

Technical Session

- General Food Microbiology

Poster Session (9:00 a.m. – 12:00 p.m.)

- Produce and Meat Microbiology

Afternoon — 1:30 p.m. – 5:00 p.m.

Symposium Topics

- Customized Approaches to Microbial Risk Assessment
- Control of *Escherichia coli* O157:H7 in Cattle
- Current Practices in Produce Safety
- Food Safety Education Update

Technical Session

- Antimicrobials

Poster Session (2:00 p.m. – 5:00 p.m.)

- Poultry, Meat and General Food Microbiology

Program subject to change

89th Annual Meeting

June 30–July 3, 2002

Event Information

EVENING EVENTS

Cheese and Wine Reception

Sunday, June 30, 2002 • 8:00 p.m. – 10:00 p.m.

Attendees and guests are invited to this traditional reception in the exhibit hall.

Exhibit Hall Reception

Monday, July 1, 2002 • 5:00 p.m. – 6:30 p.m.

Network with fellow food safety professionals during this informal reception while seeing the latest developments in the industry.

Monday Night Social at the San Diego Zoo

Monday, July 1, 2002• 6:00 p.m. – 10:00 p.m.

Polar Bear Plunge, Tiger River, Gorilla Tropics and Ituri Forest — sound interesting? The World-Famous San Diego Zoo has been the gem of the city of San Diego for more than 80 years. Join us for the Monday Night Social and see first hand some of the world's rarest wildlife. Dinner will be provided in a reserved area for IAFP 2002 attendees. The Zoo will remain open to you and the public until 10:00 p.m. Explore the Zoo on a three-mile guided double-deck bus tour or go on your own adventure. Price includes admission to the Zoo, dinner, and transportation. Get your ticket today!

San Diego Dinner Cruise

Tuesday, July 2, 2002 • 6:00 p.m. – 10:30 p.m.

The celebration begins the moment you board the Hornblower Yacht. Watch the sun go down, sip champagne and enjoy a three-course dinner prepared fresh on board by talented chefs. Then dance to music or watch the San Diego sights drift by from the outdoor decks. Tickets are limited so get yours today.

Awards Banquet

Wednesday, July 3, 2002 • 7:00 p.m. – 9:30 p.m.

A special occasion to formally recognize the accomplishments of deserving food safety professionals. An elegant reception and dinner are followed by the awards ceremony. Business attire requested.

IAFP FUNCTIONS

New Member Reception

Saturday, June 29, 2002 • 4:30 p.m. – 5:30 p.m.

If you recently joined the Association or if this is your first time attending an IAFP Annual Meeting, welcome! Attend this informal reception to learn how to get the most out of attending the Meeting and meet some of today's leaders.

Affiliate Reception

Saturday, June 29, 2002 • 5:30 p.m. – 7:00 p.m.

Affiliate officers and delegates plan to arrive in time to participate in this educational reception. Watch your mail for additional details.

Committee Meetings

Sunday, June 30, 2002 • 7:00 a.m. – 5:00 p.m.

Committees and professional Development Groups (PDGs) plan, develop and institute many of the Association's projects, including workshops, publications, and educational sessions. Share your expertise by volunteering to serve on any number of committees or PDGs.

Student Luncheon

Sunday, June 30, 2002 • 12:00 p.m. – 1:30 p.m.

The mission of the Student PDG is to provide students of food safety with a platform to enrich their experience as Members of IAFP. Sign up for the luncheon to help start building your professional network.

IAFP Job Fair

Sunday, June 30, 2002 thru Wednesday July 3, 2002

Employers, take advantage of recruiting the top food scientists in the world! Post your job announcements and interview candidates. Watch for additional information at www.foodprotection.org.

DAYTIME TOURS

(Lunch included in all daytime tours)

Wine Country Tour

Saturday, June 29, 2002 • 10:00 a.m. – 3:00 p.m.

The Temecula Valley Wine Country tour takes you on a visit to the Callaway and Thornton (formerly Culbertson's) Wineries. Guests will enjoy a private in-depth tour and a lecture-tasting of white wine at Callaway.

Afterwards, we will cross the road to Thornton for a short tour on the art of making fine champagnes. Thornton still employs the French method of hand turning the bottles during the fermenting process.

A box lunch will be served. You will be sure to enjoy this Southern California wine tasting experience!

Scenic San Diego by Land and Sea

Sunday, June 30, 2002 • 10:00 a.m. – 3:00 p.m.

Visit San Diego, the city that glistens by the sea!

The highlights of "America's Finest City" will be presented on this narrated guided tour. You will see areas such as: Old Town, Balboa Park, and San Diego's Downtown areas including the Gaslamp District and Horton Plaza. We will then tour and enjoy lunch in one of California's most charming coastal resort towns, Coronado Island.

After seeing the city by land, you will board a yacht to cruise the calm waters of the San Diego Bay. Guides will narrate points of interest such as the Coronado Bay Bridge, the Navy shipyards and aircraft carriers, Shelter Island, Harbor Island and North Island. You will enjoy this relaxing day of learning about the city that glistens by the sea!

La Jolla: The Jewel of San Diego

Monday, July 1, 2002 • 10:00 a.m. – 3:00 p.m.

La Jolla, with the tantalizing charm of a Mediterranean Isle, unique shops and breathtaking views of the Pacific, is a refreshing change of pace sure to delight even the most discriminating visitor! You will see the La Jolla Bay and Cove area. The famed La Jolla Underwater Park, maintained as an ecological reserve, is a favorite spot for scuba divers and snorkelers.

Tour guests will delight in a special 45-minute historical walking tour of La Jolla. This tour will bring the history of La Jolla to life with a personal docent who is a resident expert.

Shopping is always an extraordinary experience in La Jolla. Among the many boutiques, import shops, galleries and specialty food shops, you are sure to find unique and exclusive gifts.

A delicious lunch at George's at the Cove, one of the many fine restaurants in La Jolla, will be a special treat for all.

Behind the Scenes at the Wild Animal Park

Tuesday, July 2, 2002 • 9:00 a.m. – 2:00 p.m.

The San Diego Wild Animal Park began more than 20 years ago as a breeding facility for the San Diego Zoo's large animals. Dr. Charles Schroeder had the vision to open the 2,100-acre wildlife sanctuary for visitors to view animals roaming freely in settings similar to their native homelands. Known worldwide for its conservation efforts, the Wild Animal Park boasts over 3,000 animals from over 250 species and over 3,000 different exotic plant species.

You will enjoy a "Beastly Business" tour at the Wild Animal Park. This tour offers participants a private guided program focusing on the mammal, bird, and plant collection at the Wild Animal Park. Guests will enjoy a private monorail tour to view the extensive Asian and African field enclosures where rhinos, antelopes, giraffes, monkeys, elephants, and flamingo can be spotted from the train.

The entire program is conducted by a personal guide who can share the latest updates on animal births, new exhibit plans, and ways to help conserve endangered animals and their habitat.

As part of the "Behind the Scenes Tour," you will also experience a privately guided walking tour and an up close encounter with an exotic animal and its trainer in a special VIP Program. A lunch voucher is included so you can grab a bite to eat while enjoying your day at the Wild Animal Park.

HOSPITALITY ROOMS

Spouse/Companion Room

Register your spouse/companion and they will have access to the hospitality room where a continental breakfast and afternoon snacks are provided Sunday through Wednesday.

Retired Member Room

At the request of IAFP Retired Members, a room has been set aside for their use. A cribbage board, cards, and other games will be available. You are invited to bring your favorite game to challenge your fellow retired colleagues.

89th Annual Meeting

June 30–July 3, 2002

IMPORTANT! Please read this information before completing your registration form.

MEETING INFORMATION

Register to attend the world's leading food safety conference. Registration includes:

- Technical Sessions
- Symposia
- Poster Presentations
- Ivan Parkin Lecture
- Exhibit Hall Admittance
- Cheese and Wine Reception
- Exhibit Hall Reception
- Program and Abstract Book

4 EASY WAYS TO REGISTER

Complete the Attendee Registration Form and submit it to the International Association for Food Protection by:

Online: www.foodprotection.org

Fax: 515.276.8655

Mail: 6200 Aurora Avenue, Suite 200W,
Des Moines, IA 50322-2864, USA

Phone: 800.369.6337; 515.276.3344

The early registration deadline is May 30, 2002. After this date, late registration fees are in effect.

REFUND/CANCELLATION POLICY

Registration fees, less a $50 administration fee and any applicable bank charges, will be refunded for written cancellations received by June 7, 2002. No refunds will be made after June 7, 2002; however, the registration may be transferred to a colleague with written notification. Refunds will be processed after July 8, 2002. Event and tour tickets purchased are nonrefundable.

International Association for Food Protection®

EXHIBIT HOURS

Sunday, June 30, 2002	8:00 p.m. – 10:00 p.m.
Monday, July 1, 2002	9:30 a.m. – 1:30 p.m. 3:00 p.m. – 6:30 p.m.
Tuesday, July 2, 2002	9:30 a.m. – 1:30 p.m.

DAYTIME TOURS

(Lunch included in all daytime tours)

Saturday, June 29, 2002	
Wine Country Tour	10:00 a.m. – 3:00 p.m.
Sunday, June 30, 2002	
Scenic San Diego by Land and Sea	10:00 a.m. – 3:00 p.m.
Monday, July 1, 2002	
La Jolla: The Jewel of San Diego	10:00 a.m. – 3:00 p.m.
Tuesday, July 2, 2002	
Behind the Scenes at the Wild Animal Park	9:00 a.m. – 2:00 p.m.

EVENING EVENTS

Sunday, June 30, 2002	
Opening Session	7:00 p.m. – 8:00 p.m.
Cheese and Wine Reception	8:00 p.m. – 10:00 p.m.
Monday, July 1, 2002	
Exhibit Hall Reception	5:00 p.m. – 6:30 p.m.
Monday Night Social at the San Diego Zoo	6:00 p.m. – 10:00 p.m.
Tuesday, July 2, 2002	
Dinner Cruise	6:00 p.m. – 10:30 p.m.
Wednesday, July 3, 2002	
Awards Banquet Reception	6:00 p.m. – 7:00 p.m.
Awards Banquet	7:00 p.m. – 9:30 p.m.

HOTEL INFORMATION

For reservations, contact the hotel directly and identify yourself as an International Association for Food Protection Annual Meeting attendee to receive a special rate of $143 per night, single or double. Make your reservations as soon as possible; this special rate is available only until May 30, 2002.

Manchester Grand Hyatt San Diego
(Formerly Hyatt Regency San Diego)
One Market Place
San Diego, California 92101
Phone: 800.233.1234
619.232.1234

International Association for
Food Protection®
6200 Aurora Avenue, Suite 200W
Des Moines, IA 50322-2864, USA
Phone: 800.369.6337 • 515.276.3344
Fax: 515.276.8655
E-mail: info@foodprotection.org
Web site: www.foodprotection.org

Attendee Registration Form

June 30–July 3, 2002
San Diego, CA

Name (Print or type your name as you wish it to appear on name badge) _____ Member Number: _____

Employer _____ Title _____

Mailing Address (Please specify: ❒ Home ❒ Work) _____

City _____ State/Province _____ Country _____ Postal/Zip Code _____

Telephone _____ Fax _____ E-mail _____

❒ First time attending meeting Member since: _____

❒ Regarding the ADA, please attach a brief description of special requirements you may have.

❒ IAFP occasionally provides Attendees' addresses (excluding phone and E-mail) to vendors and exhibitors supplying products and services for the food safety industry. If you prefer NOT to be included in these lists, please check the box.

PAYMENT MUST BE RECEIVED BY MAY 30, 2002 TO AVOID LATE REGISTRATION FEES

REGISTRATION FEES:	MEMBERS	NONMEMBERS	TOTAL
Registration (Awards Banquet included)	$ 295 ($345 late)	$ 445 ($495 late)	
Association Student Member (Awards Banquet included)	$ 50 ($ 60 late)	Not Available	
Retired Association Member (Awards Banquet included)	$ 50 ($ 60 late)	Not Available	
One Day Registration:* ❒ Mon. ❒ Tues. ❒ Wed.	$ 165 ($190 late)	$ 225 ($250 late)	
Spouse/Companion* (Name): _____	$ 45 ($ 45 late)	$ 45 ($ 45 late)	
Children 15 & Over* (Names): _____	$ 25 ($ 25 late)	$ 25 ($ 25 late)	
Children 14 & Under* (Names): _____	FREE	FREE	
*Awards Banquet not included			

EVENTS:		# OF TICKETS	
Student Luncheon (Sunday, 6/30)	$ 5 ($ 10 late)		
Monday Night Social at the San Diego Zoo (Monday, 7/1)	$ 39 ($ 44 late)		
Children 14 and under	$ 34 ($ 39 late)		
Dinner Cruise (Tuesday, 7/2)	$ 70 ($ 75 late)		
Awards Banquet (Wednesday, 7/3)	$ 45 ($ 50 late)		

DAYTIME TOURS: (Lunch included in all daytime tours)			
Wine Country Tour (Saturday, 6/29)	$ 63 ($ 68 late)		
Scenic San Diego by Land and Sea (Sunday, 6/30)	$ 68 ($ 73 late)		
La Jolla: The Jewel of San Diego (Monday, 7/1)	$ 71 ($ 76 late)		
Behind the Scenes at the Wild Animal Park (Tuesday, 7/2)	$ 76 ($ 81 late)		

PAYMENT OPTIONS:

❒ Check Enclosed ❒ VISA ❒ MasterCard ❒

TOTAL AMOUNT ENCLOSED $ _____ US FUNDS on US BANK

Expiration Date _____

Name on Card _____

Signature _____

JOIN TODAY AND SAVE!!!
(Attach a completed Membership application)
(See page 311 of this issue for a Membership application)

EXHIBITORS DO NOT USE THIS FORM

Workshops of IAFP 2002

Workshop I

Critical Steps in Laboratory Methods for the Detection of *Listeria monocytogenes*

This workshop is intended as an ongoing update of the science in the isolation of *Listeria monocytogenes*. Participants are exposed to the most current information on the advantages and disadvantages of currently employed technologies used in recovery of this pathogen. The evolution of each tool, its associated challenges and how these issues are overcome, pending changes in the various technologies and the quality aspects of each technology are discussed. This two-day workshop includes lectures and laboratory demonstrations at San Diego State University of various technologies from a vendor of each application as well as interaction from the presenter covering that specific methodology.

Workshop Topics

- Why Study *L. monocytogenes*
- Critical Steps in the Detection of *L. monocytogenes* Using:
  - Cultural Methods (USDA/FDA)
  - Immunological Methods
  - Nucleic Acid Methods
  - RAPD Ribotyping
  - Pulsed Field Electrophoresis
- Development and Validation of Methodologies for the Detection of *L. monocytogenes*
- USDA/FSIS Analysis of *L. monocytogenes*

Instructors

James R. Agin, Ohio Department of Agriculture, Reynoldsburg, OH
Bill Cray, Ph.D., USDA/FSIS Laboratory, Athens, GA
Judy Fraser-Heaps, General Mills, Apple Valley, MN
Anthony D. Hitchins, Ph.D., FDA/CFSAN, College Park, MD
Timothy C. Jackson, Ph.D., Nestlé USA, Dublin, OH
Franco Pagotto, Ph.D., Health Canada, Ottawa, Ontario, Canada
W. Payton Pruett, Jr., Ph.D., ConAgra Refrigerated Prepared Foods, Downers Grove, IL

Organizer

Robert W. Brooks, Woodson-Tenent Laboratories, Gainesville, GA

Who Should Attend?

This workshop is intended for the professional or laboratorian already working in the science of isolating *L. monocytogenes*. As the workshop is intended to hone the skills of laboratory personnel in recovery of this pathogen, it is assumed that the participants have a working knowledge of basic laboratory operations.

Hours for Workshop

Friday, June 28, 2002	Saturday, June 29, 2002
Registration — 7:30 a.m. Continental Breakfast	**Registration —** 7:30 a.m. Continental Breakfast
Workshop — 8:00 a.m. – 5:00 p.m. (Lunch provided)	**Workshop —** 8:00 a.m. – 4:00 p.m. (Lunch provided)

Workshop II

Current Practices in Produce Safety: GAPs and GMPs

In Partnership with United Fresh Fruit and Vegetable Association

The objective of this one and one-half day workshop is to discuss the impact of growing practices on the food safety of produce. Industry and university experts will present and share current knowledge regarding the application of "Good Agricultural Practices" for pre- and post-harvest produce.

The first day of the workshop will involve a one-half day field trip to local produce growing and packing operations to observe first-hand the practical applications of the materials presented.

On the second day of this session, participants will learn about relevant laws, microbial agents responsible for foodborne illness outbreaks linked to produce, chemical and physical hazards, and the most significant means of minimizing their associated risks.

Workshop Topics

- Good Agricultural and Manufacturing Practices in the Fresh Produce Industry
- Produce Industry Perspective on the Development, Implementation, and Verification of GAPs and GMPs
- Produce Specific Food Law
- Retail Buyer Perspective on the Development, Implementation, and Verification of GAPs and GMPs
- Produce Microbiology 101
- Impact of Growing and Post-harvest Practices on Produce Food Safety
- Safe Growing and Handling Practices to Reduce Chemical Hazards
- Safe Growing and Handling Practices to Reduce Microbial and Physical Hazards

Instructors

Robert E. Brackett, Ph.D., CFSAN/FDA, College Park, MD
Joe Furuike, Driscoll Strawberry Associates, Inc., Watsonville, CA
Robert B. Gravani, Ph.D., Cornell University, Ithaca, NY
Mark Harrison, Ph.D., University of Georgia, Athens, GA
Mahipal R. Kunduru, Ph.D., Dole Fresh Vegetables, Inc., Salinas, CA
Frances F. Pabrua, Fresh Express Inc., Salinas, CA
Gale Prince, The Kroger Co., Cincinnati, OH
Trevor V. Suslow, Ph.D., University of California-Davis, Davis, CA

Organizers

Philip G. Blagoyevich, The HACCP Institute, San Ramon, CA
Donna M. Garren, Ph.D., United Fresh Fruit and Vegetable Association, Alexandria, VA

Who Should Attend?

This workshop is intended for growers, shippers, and processors of fresh fruits and vegetables. Food safety and quality assurance professionals interested in produce food safety would also benefit from this workshop.

Hours for Workshop

Friday, June 28, 2002	Saturday, June 29, 2002
Registration –	**Registration –**
12:00 p.m. - 12:30 p.m.	7:30 a.m. Continental Breakfast
Tours –	**Workshop –**
12:30 p.m. - 5:00 p.m.	8:00 a.m. - 5:00 p.m. (Lunch provided)

Workshop III

Control of Pathogens in the Dairy Processing Environment

This workshop is intended to help dairy processing facilities design and implement an effective pathogen monitoring program for their products and their plant environment. With greater emphasis on HACCP in the dairies and mandatory HACCP for 100% juice processors, environmental monitoring can be invaluable as a pre-requisite program and product testing can be used to verify that HACCP is effective. This workshop will discuss the when, where, how and why of sampling both products and environment. A brief review of current technologies will help participants evaluate and choose appropriate tools to be used in their monitoring program. Participants will learn how data from a monitoring program provides the foundation for setting up pathogen control measures. Emphasis will be placed on determining effective corrective actions and follow-up testing for positive test results. Participants will have opportunities for interaction with the presenter to discuss points of interest.

Workshop Topics

- Overview of Pathogens of Concern to the Dairy Processor
- Sampling Plan for Environmental and Finished Products
- Methods of Sampling
- Overview of Methodology
- Corrective Actions/Follow-up and Auditing/ Verification
- Role of Training and Employee Awareness

Instructors

Kathryn J. Boor, Ph.D., Cornell University, Ithaca, NY
Larry Cohen, Kraft Foods, Inc., Glenview, IL
Beth Ann Crozier-Dodson, Kansas State University, Manhattan, KS
Roger Hooi, Dean Foods Technical Center, Rockford, IL
Margaret A. Poole, Ph.D., Hood Dairies, Chelsea, MA
L. Michele Smoot, Ph.D., Silliker Laboratories Group, Inc., Carson, CA

Organizers

Paul A. Hall, Kraft Foods, Inc., Glenview, IL
Kay N. Sadler, New-Tech Consulting, Inc., Milford, OH
Gaylord B. Smith, Mohawk Associates, Schenectady, NY

(Workshop information continued on next page)

Who Should Attend?

This workshop is intended for dairy processors, quality assurance and food safety individuals.

Hours for Workshop

Saturday, June 29, 2002

Registration — 7:30 a.m.

Continental Breakfast

Workshop — 8:00 a.m. - 5:00 p.m.
(Lunch provided)

Workshop IV

Media Training for the Scientific Community

In Partnership with
International Food Information Council

The scientific community today is conducting cutting-edge, valuable research with the potential to enhance the safety of the world's food supply. There is also an open platform for food safety issues to be discussed and a golden opportunity to provide balance on controversial issues such as foodborne illness, BSE, food biotechnology and other new and emerging technologies. The media have proven to be key for scientists and food safety experts to get their message heard.

While the most common source of health and food safety information is the media, the most trusted sources include scientists as well as doctors. It is our goal to assist workshop attendees in developing practical media techniques, which are necessary for developing messages useful during media interviews. Message development and delivery are critical in providing the audience with the information you want heard.

Workshop Topics

- Effective communication strategies to communicate key messages to the audience
- Ways to identify your audience needs and provide them with information they need to know
- How to transform a negative interview into a positive one with strategic message development
- Intensive on-camera interview training

Instructors

Shelly Sims, Susan Peterson Productions, Washington, D.C.

Nan Tolbert, Susan Peterson Productions, Washington, D.C.

Organizers

Tony Flood, International Food Information Council, Washington, D.C.

Dave Schmidt, International Food Information Council, Washington, D.C.

Who Should Attend?

This workshop is intended for key professionals, experts in their field, who are responsible for communicating with the public via the media. *Due to the extensive, hands-on activities in this workshop,* ***attendance is limited to 10 participants.***

Hours for Workshop

Saturday, June 29, 2002

Registration — 7:30 a.m.

Continental Breakfast

Workshop — 8:00 a.m. - 4:30 p.m.
(Lunch provided)

Visit our Web site
www.foodprotection.org

Annual Meeting Workshops

♦ Registration Form ♦

Friday-Saturday, June 28-29, 2002

- ❑ Workshop I: Critical Steps in Laboratory Methods for the Detection of *Listeria monocytogenes*
- ❑ Workshop II: Current Practices in Produce Safety: GAPs and GMPs

Saturday, June 29, 2002

- ❑ Workshop III: Control of Pathogens in the Dairy Processing Environment
- ❑ Workshop IV: Media Training for the Scientific Community

First Name (will appear on badge)	Last Name	
Company	Job Title	
Address	City	
State/Province	Country	Postal Code/Zip + 4
Area Code & Telephone	Fax	
E-mail	Member #	

Payment Options:

❑ Check Enclosed ❑ VISA ❑ MasterCard ❑

Name on Card _____ Total Amount Enclosed _____

Signature _____ Expiration date _____

For further information, please contact the Association office at 800.369.6337; 515.276.3344; Fax: 515.276.8655; E-mail: jcattanach@foodprotection.org

Register by June 7, 2002 to avoid late registration fees

♦ Registration ♦

WORKSHOP I: **Critical Steps in Laboratory Methods for the Detection of *Listeria monocytogenes***	Early Rate	Late Rate
IAFP Member	$525.00	$600.00
NonMember	$625.00	$700.00

WORKSHOP II: **Current Practices in Produce Safety: GAPs and GMPs**	Early Rate	Late Rate
IAFP Member	$325.00	$400.00
NonMember	$425.00	$500.00

WORKSHOP III: **Control of Pathogens in the Dairy Processing Environment**	Early Rate	Late Rate
IAFP Member	$300.00	$375.00
NonMember	$400.00	$475.00

WORKSHOP IV: **Media Training for the Scientific Community**	Early Rate	Late Rate
IAFP Member	$650.00	$725.00
NonMember	$750.00	$825.00

GROUP DISCOUNT:
Register 3 or more people from your company for one workshop and receive a 15% discount. Registrations must be received as a group. Discount does not apply to Workshop IV.

Refund/Cancellation Policy

Registration fees, less a $50 administrative charge, will be refunded for written cancellations received by June 14, 2002. No refunds will be made after that date; however, the registration may be transferred to a colleague with written notification. Refunds will be processed after July 8, 2002. The workshop may be cancelled if sufficient enrollment is not received by June 7, 2002.

♦ 4 Easy Ways to Register ♦

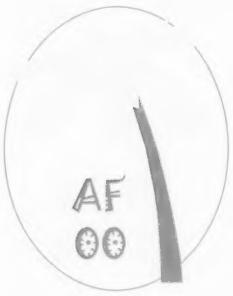
To register, complete the Workshop Registration Form and submit to the International Association for Food Protection by:

Online: www.foodprotection.org

Fax: 515.276.8655

Mail: 6200 Aurora Avenue, Suite 200W, Des Moines, IA 50322-2864, USA

Phone: 800.369.6337; 515.276.3344



Sponsors of IAFP 2002

3M Microbiology Products

BD Diagnostic Systems

bioMérieux, Inc.

Capitol Vial, Inc.

Deibel Laboratories, Inc.

DiverseyLever/U.S. Food Group

DQCI Services, Inc.

DuPont Qualicon

Ecolab, Inc., Food and Beverage Division

F & H Food Equipment Company

Wilbur Feagan

Foss North America, Inc.

IGEN International, Inc.

International Life Sciences Institute, N.A. (ILSI, N.A.)

International Packaged Ice Association (IPIA)

Kraft Foods, Inc.

Nasco International, Inc.

National Food Processors Association

Nelson-Jameson, Inc.

Nestlé USA, Inc.

NSF International

Pepsi-Cola Company

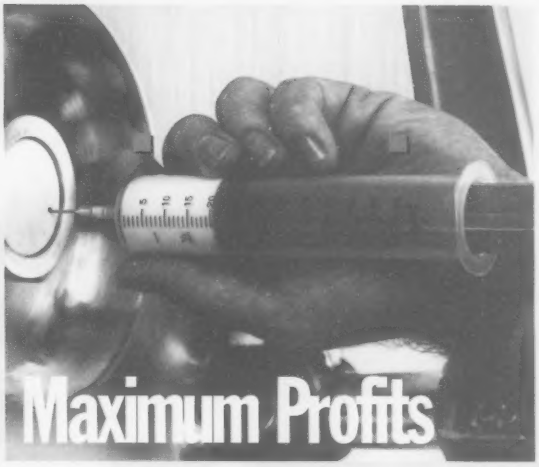
Seward Limited

Warren Analytical Laboratory

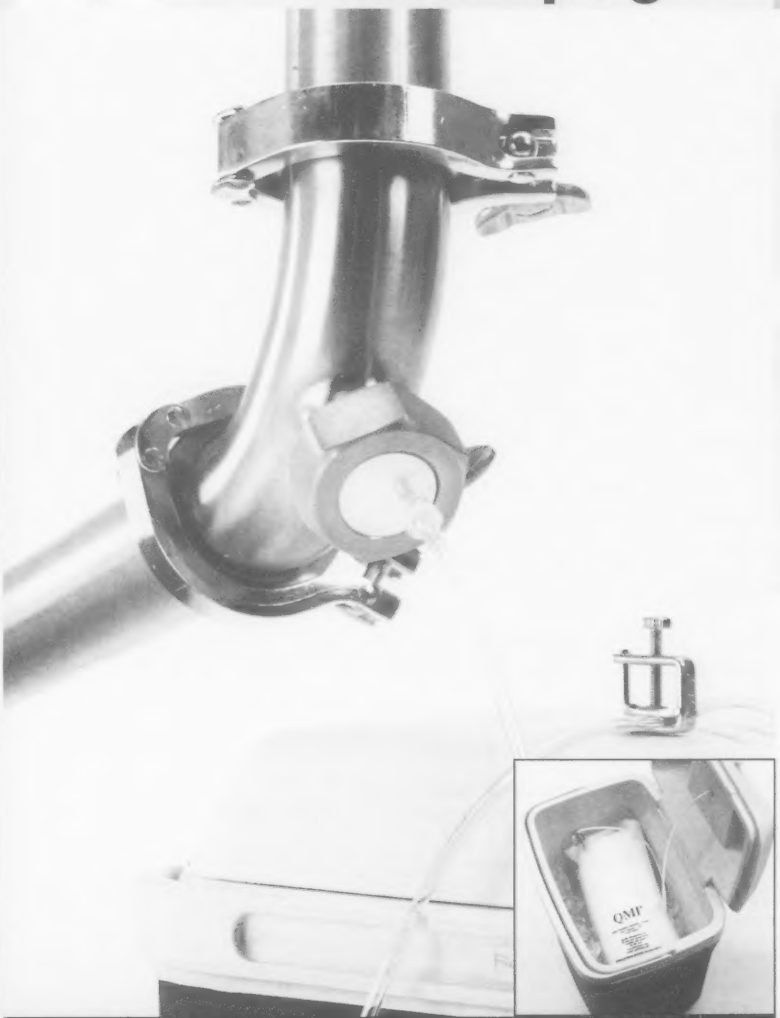
Weber Scientific

Thank You

Today's Dairy Farmers Require Accurate Milk Sampling For Maximum Profits



Staphylococcus aureus



You work hard to run a clean and healthy dairy operation. Get maximum profits for all that effort by using the QMI Line and Tank Sampling System. The benefits are:

- Precise composite sampling to aid in mastitis control
- Contamination-free sampling resulting in accurate bacterial counts
- Reliable sampling to measure milk fat and protein

As you know, your testing is only as good as your sampling.

Escherichia coli

For more information, visit our website at www.qmisystems.com or the University of Minnesota website at http://mastitislab.tripod.com/index.htm

For more information, contact:

QMI
426 Hayward Avenue North
Oakdale, MN 55128
Phone: 651.501.2337
Fax: 651.501.5797
E-mail address: qmi2@aol.com

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QMI®

Quality Management, Inc.

Reader Service No. 113

Exhibitors of IAFP 2002

(Companies scheduled to exhibit as of March 1, 2002)

3-A Sanitary Standards Symbol Administrative Council
Phone: 319.286.9221 Fax: 319.286.9290

3M Microbiology Products
Phone: 800.228.3957 Fax: 651.737.1994

AATI
Phone: 515.296.6600 Fax: 515.296.6789

ABC Research Corporation
Phone: 352.372.0436 Fax: 352.378.6483

Advanced Instruments, Inc.
Phone: 800.225.4034 Fax: 781.320.8181

AES – Chemunex, Inc.
Phone: 609.497.0166 Fax: 609.497.7307

ANKOM Technology
Phone: 716.425.3940 Fax: 716.425.3941

BD Diagnostic Systems
Phone: 410.316.4000 Fax: 410.316.4906

BioControl Systems, Inc.
Phone: 425.603.1123 Fax: 425.603.0080

bioMérieux, Inc.
Phone: 314.506.8052 Fax: 314.731.8678

Brinkmann Instruments, Inc.
Phone: 800.645.3050 Fax: 516.334.7521

California Department of Health Services, Food and Drug Branch
Phone: 916.445.2264 Fax: 916.322.6326

Charm Sciences, Inc.
Phone: 800.343.2170 Fax: 978.687.9216

Copan Diagnostics, Inc.
Phone: 800.216.4016 Fax: 909.549.8850

Decagon Devices, Inc.
Phone: 800.755.2751 Fax: 509.332.5158

Deibel Laboratories, Inc.
Phone: 941.925.1579 Fax: 941.925.2130

Diffchamb AB
Phone: 46.31.742.33.50 Fax: 46.31.58.33.70

DonLevy Laboratories
Phone: 219.736.0472 Fax: 219.736.0539

DQCI Services, Inc.
Phone: 763.785.0484 Fax: 763.785.0584

DuPont Qualicon
Phone: 302.695.5218 Fax: 302.695.5281

Dynal Biotech, Inc.
Phone: 866.DYNALTT

Elsevier Science
Phone: 212.633.3730 Fax: 212.633.3112

EM Science
Phone: 856.423.6300 Fax: 856.423.6313

Food Processors Institute
Phone: 800.355.0983 Fax: 202.639.5932

Food Quality Magazine
Phone: 215.860.7800 Fax: 215.860.7900

Food Safety Magazine
Phone: 818.842.4777 Fax: 818.769.2939

Food Safety Net Services, Ltd.
Phone: 888.525.9788 Fax: 210.308.8730

FoodHandler, Inc.
Phone: 516.338.4433 Fax: 516.338.5486

Foss North America, Inc.
Phone: 952.974.9892 Fax: 952.974.9823

Hardy Diagnostics
Phone: 805.346.2766 Fax: 805.614.9274

IGEN International, Inc.
Phone: 800.336.4436 Fax: 240.632.2206

International Association for Food Protection
Phone: 800.369.6337 Fax: 515.276.8655

International Association for Food Protection – Student PDG
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Tuesday, July 2, 2002
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In Memory of...

Don F. Splittstoesser

Cornell University Emeritus Professor Don F. Splittstoesser, 74, passed away on December 23, 2001. Dr. Splittstoesser was internationally recognized as an authority on food microbiology. His research expertise was on bacteria and other microorganisms that cause foodborne diseases in humans. He worked in the department of food science and technology at the New York State Agricultural Experiment Station, in Geneva, NY.

During his career, Don wrote approximately 200 scientific and technical papers. He made nearly that many presentations nationally and internationally at industry meetings and training programs, and to professional organizations—wherever the topic was pathogens and spoilage microorganisms associated with fruit and vegetable products. He was editor for several editions of the food microbiology 'bible' – *Compendium of Methods for the Microbiological Examination of Foods.*

Dr. Splittstoesser received a B.S. in agriculture, a M.S. in bacteriology, and a Ph.D. in microbiology and biochemistry, all from the University of Wisconsin. He began at Cornell University as an assistant professor in 1958. Don became an associate professor in 1964 and a full professor in 1969. He served as chairman of the food science and technology department in Geneva from 1982 until 1989, and was named professor emeritus in 1995.

He was a member of many professional organizations, including: The International Association for Food Protection, the American Society for Microbiology, the Institute of Food Technologists, American Society for Enology and Viticulture, and Sigma Xi.

Dr. Splittstoesser received numerous honors throughout his career. He was named a fellow of the Institute of Food Technologists in 1984. The American Society of Enology and Viticulture, Eastern Section gave him their Outstanding Achievement Award in 1991, and he won the William V. Hickey Award from the New York State Association for Food Protection in 1994.

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·**7-9, Advanced HACCP & IDV, Kansas City, MO.** For further information, contact Lilly Mitchell at 202.639.5904; E-mail: fpi@nfpa-food.org.

·**8, Metropolitan Association of Dairy, Food and Environmental Specialists Spring Seminar,** Cook College Campus Center, Rutgers University, New Brunswick, NJ. For further information, contact Carol Schwar at 908.689.6693.

·**8-10, Environmental Health: Protecting Children,** West Coast Olympia Hotel, Olympia, WA. For further information, contact Rick Zahalka at 425.339.5250; E-mail: rzahalka@shd.snohomish.wa.gov.

·**13-15, Pennsylvania Association of Milk, Food and Environmental Sanitarians Spring Meeting,** Nittany Lion Inn, State College. For further information, contact Eugene Frey at 717.397.0719.

·**14-15, Applied Dairy Chemistry Short Course,** University of Wisconsin-Madison, Madison, WI. For further information, contact Dr. Bill Wendorff at 608.263.2015.

·**16-17, Consumer Complaints, Orlando, FL.** For further information, contact Lilly Mitchell at 202.639.5904; E-mail: fpi@nfpa-food.org.

·**20-22, Microbiology and Engineering of Sterilization Processes Course,** St. Paul, MN. For further information, contact Ms. Ann Rath at 612.626.1278.

·**20-24, 3-A Sanitary Standards Committee Annual Meeting,** Sheraton Four Points Hotel, Milwaukee Airport, Milwaukee, WI. For more information, contact Tom Gilmore at 703.761.2600; E-mail: tgilmore@iafis.org.

·**22-24, Irradiation,** Chicago, IL. For further information, contact Lilly Mitchell at 202.639.5904; E-mail: fpi@nfpa-food.org.

JUNE

·**4-5, Clean-In Place (CIP) Short Course**, Michigan State University, East Lansing, MI. For further information, call 517.355.7713 ext. 177; E-mail: partridg@msu.edu.

·**4-6, Penn State Food Microbiology Short Course: Detection and Control of Foodborne Pathogens**, Penn State Berks Campus, Reading, PA. For further information, Dr. Cathy Cutter at 814.865.8862; E-mail: cnc3@psu.edu.

·**28-29, IAFP Workshops,** San Diego, CA.

Workshop I – "Critical Steps in Laboratory Methods for the Detection of *Listeria monocytogenes*"

Workshop II – "Current Practices in Produce Safety: GAPs and GMPs"

·**29, IAFP Workshops,** San Diego, CA.

Workshop III – "Control of Pathogens in the Dairy Processing Environment"

Workshop IV– "Media Training for the Scientific Community"

See page 294 of this issue for additional workshop information.

·**30-July 3, IAFP 2002, the Association's 89th Annual Meeting,** San Diego, CA. Registration materials available in this issue of *DFES* on page 293 or visit our Web site at **www.foodprotection.org** for the most up-to-date Annual Meeting information.

JULY

·**12-19, 22nd International Workshop/Symposium on Rapid Methods and Automation in Microbiology,** Manhattan, KS. For further information, contact Daniel Y. C. Fung at 785.532.5654; E-mail: dfung@oznet.ksu.edu.

·**28-31, 39th Annual Florida Pesticide Residue Workshop and 5th Annual Florida Foodborne Pathogen Analysis Conference,** Trade Winds Island Grand Resort, St. Pete Beach, FL. For further information, contact W. George Fong at gandwfong@cs.com.

AUGUST

·**12-16, Introduction to Food Science,** Rutgers College, New Brunswick, NJ. For further information, contact Keith Wilson at 732.932.9271; E-mail: kwilson@aesop.rutgers.edu.

SEPTEMBER

·**10-11, Upper Midwest Dairy Industry Association Annual Meeting,** Holiday Inn, St. Cloud. For more information, contact Paul Nierman at 763.785.0484.

·**17-19, New York Association for Food Protection Annual Meeting,** Holiday Inn, Syracuse/Liverpool, NY. For more information, contact Janene Lucia at 607.255.2892.

·**18-22, AWT Announces Its 2002 Convention,** Disney's Coronado Springs Resort, Orlando, FL. For further information, contact Carrie Harley at 800.858.6683; E-mail: charley@awt.org.

·**23-25, Indiana Environmental Health Association Fall Educational Conference,** University Inn, West Lafayette. For more information, contact Helene Uhlman at 219.853.6358.

·**24-26, Wyoming Environmental Health Association Annual Educational Conference,** Camplex Center, Gillette. For more information, contact Sherry Maston at 307.322.9671.

·**25-27, Washington Association for Food Protection Annual Meeting,** Campbells' Resort, Chelan, WA. For more information, contact Bill Brewer at 206.363.5411.

·**25-29, The 27th World Veterinary Congress, WORLDVET Tunisia 2002,** Tunis, Tunisia. Contact http://www.worldvetunisia2002.com/ for registration and additional program information.

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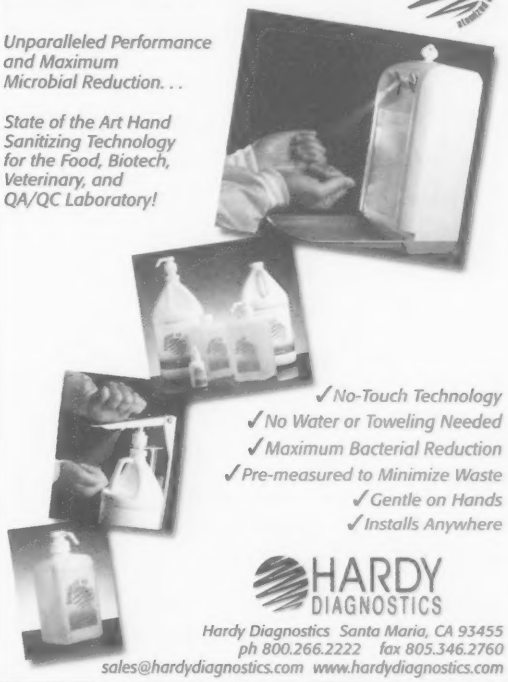

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THOUGHTS on Today's Food Safety...

Food Security and Bioterrorism

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The term "terrorism" has become all too familiar to the world since September 11th. The question which everyone is asking is, "Should we be concerned about bioterrorism in relation to our food supply?" I believe that a better question is, "Should we be concerned about food security?" I am not particularly concerned about someone adding *Salmonella Typhimurium* to the raw chicken that I purchase at the local market since I know that the product could have these bacteria naturally and pathogenic bacteria will be destroyed by cooking the product appropriately. I don't especially worry about someone dumping *Clostridium botulinum* toxin in the river since the dilution effect and environmental degradation would render it ineffective very quickly. However, I do believe that food security is very serious business!

We have seen the economic effects of product tampering on major corporations. Terrorism is not just the purview of crazies and political or religious groups. In the competitive world in which we live, industrial espionage or sabotage are realities which food producers, processors, distributors and retailers cannot afford to ignore. Did this start on September 11th? Of course not! However, many of us in the food industry and those who work in the food system have preferred the innocence of vulnerability to the cynicism of reality, believing that others share the same moral and ethical values which would never allow us to even think the unthinkable. We lost that innocence on September 11th and it changed the way we view our world.

Is this a bad thing? I would argue that these recent events will force us to take a look at food security and perhaps devote additional resources to food security which should have already been in place to maintain the productivity and economic stability of our food system. With increasing reliance upon imported and exported foods, this becomes important not only in the U.S. but throughout the world. Many progressive companies and corporations already have these plans in place and the International Association for Food Protection has published brochures and held workshops on disaster management. Product recalls are a disaster for a company and all companies should have a crisis management program.

Food security goes a step further than crisis management, HACCP and the traditional biological threats that food safety experts deal with daily. We must consider NBC (nuclear, biological and chemical) agents, personnel screening, handling of visitors, handling of mail/packages/receiving, a security plan, training, physical security, laboratory safety, storage/inventory of hazardous chemicals, identification systems, restricted access areas, security of air, water and gases and of course security of computers and finished products. Producers, food processors, distributors and retailers need to have a security plan and need to audit those plans on a regular basis.

Worrying about food biosecurity does not solve the problem. Inflammatory articles by the media are not helpful. Instead, I would suggest that having a food security plan, implementing it and following through on that plan are in the best interests of everyone associated with the food system from the farm to the consumer. The FDA CFSAN guidelines on food security are an excellent place to start.

Editor's Note: FDA CFSAN guidelines are available at www.cfsan.fda.gov.

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